THE

AMERICAN FARMER:

DEVOTED TO

AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

[FIFTH SERIES.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

Vol. I. **BALTIMORE, MAY, 1860.** **No. 11.**

MAY.

"The spirit of the gentle South wind calls
From her blue throne of air,
And where his whispering voice in music falls,
Beauty is budding there;
The bright ones of the valley break
Their slumbers, and awake."

These "bright ones of the valley," how sweetly they speak to us. So lately slumbering in death, now all awake, alive, arisen. The whispering voice of the gentle South wind has called, and they have come forth, all-glorious in the beauty of a new life. So little worth in the eyes of worldly wisdom, yet so cared for; "they toil not, they spin not," yet they stand arrayed in more than royal glory. Rose and lily, cowslip and primrose, pure, sweet, voiceless messengers are they all, telling us of a new life for him that was dead, and new glory for the lowliest and least worthy.

WORK FOR THE MONTH.

All the labours of the month are inspired with hopeful expectation. We work and wait. No fruit rewards our toil, only the blossoms promise it to us; no ripened grain fills our garners, only green fields of waving straw, subject to blight and blast, encourage us. Yet we work on, looking surely that our labour will not be all in vain.

CORN.

The Corn field is the great object of interest this month. It is to be hoped, where the crop has not been planted, (as in much of the Southern country it has been,) the ground has at least been well, deeply, thoroughly ploughed, and that with harrow and roller, if necessary, it has been put in the very best condition. This being done in anticipation of the planting, it is easy work afterwards to give all the necessary cultivation before harvest. Have this in view from the start, and you will probably accomplish it, to leave a well worked and clean Corn field at wheat harvest, and not to touch it afterwards. A full crop cannot be made without a full supply of plants on the ground, and close planting is not prudent if the roots are to be torn up with plough or cultivator after the Corn has tasselled. Three and a half feet each way gives room enough, if the work is begun early and finished early.

TOBACCO.

It is very desirable now, as soon as the corn is planted, to get rid of the past year's crop. Keep the beds thoroughly clean, not allowing the grass any foothold—dress them well with compost or guano after each picking. The inexperienced planter should be reminded of the paramount importance of the most careful attention to the Tobacco beds. A failure to secure an ample supply of plants in due time may involve the entire failure of a crop.

While smaller plants may be set out this month than later in the season, there is little gained by beginning to draw the beds early, unless where they are crowded. The chances are ten to one in favour of a large plant with good roots, over a small one with small roots. It is not only more certain to grow, but has greatly the advantage in time. Care should be used in planting together plants of about equal size. The indiscriminate mixture of large and small plants in the same ground is very bad practice.

The whole Tobacco ground having had, it is presumed, a good ploughing in the early spring, as soon as corn is planted the final preparation for planting should be made by a ploughing not deep enough to disturb the inverted sod. With this ploughing whatever manure is to be used may be applied. It would not be amiss, however, to postpone the application of fertilizers

(except such domestic manures as have not been thoroughly composted) until the ground is about to be laid off for planting.

POTATOES.

It is the common custom—and generally advised in the papers—to plant Potatoes for the main crop this month. We prefer planting as late as the middle of June, for reasons we have repeatedly given. A good sod turned over is best for Potatoes, and if it has been manured on the surface last fall, it were much better than manuring now. It is useless, however, to expect a large crop, except on land of very high quality, without an abundance of manure at one time or another, and no crop pays better for an expenditure on this account. Let these be on hand in advance of the time for using them.

ROOT CROPS.

Whatever root crops you may intend to cultivate, should be planted this month, the sooner the better, with the exception of Turnips. The Ruta Baga from the middle of July to 1st of August and the white Turnip later. All root crops are heavy feeders, and must have food accordingly.

SUGAR MILLET.

The Sorghum is excellent early food for hogs, as well as for cows and horses. Have a small crop for these purposes, and a few barrels of good syrup would be greatly appreciated by your negroes. Do not plant before the middle of the month.

PEAS.

The field Pea should be got in the ground in this latitude by the last of this month, but not before the middle of it. If sown broadcast, 1½ to 2 bushels per acre should be sown, but if in drills 2½ to 3 feet apart, less seed will do. Where sown exclusively or chiefly for the improvement of the land, the largest quantity is best. The Clay and the Black Pea are considered the best varieties for broadcast sowing. The pea vine makes valuable food for cattle, and a lot of peas is very good to begin the fattening of hogs upon.

HUNGARIAN GRASS.

A heavy crop per acre of good hay can be made by sowing the seed of this grass about the first of June on finely prepared and well manured ground. A peck of seed to the acre is sufficient, but a crop of finer quality may be got by sowing a large quantity—a half bushel is not too much.

BROADCAST CORN.

Sow Corn broadcast, two or three bushels to the acre, for feeding to stock in the yards in August and September.

PUMPKINS, CYMBLINS, &C.

Do not neglect to plant these crops in due time.

SWEET POTATOES.

This is a valuable root, which is too much overlooked. There should be raised a full supply for family use at the least, and a good lot of them to be harvested by your pen hogs early in the fall, would well repay cost.

SHEEP SHEARING.

Do not postpone your sheep shearing too long. The loss of wool and injury to the sheep is the result of too long delay.

THE VEGETABLE GARDEN.

MAY.

It is to be hoped that the foundation work of the garden—consisting of a thorough digging and manuring—has been already done, and many of the staple crops put in the ground as suggested heretofore. All the principal vegetables must be got in this month, and a general and careful cultivation carried on as grass and weeds show themselves; it is equally true in gardening as in another domestic occupation, that "a stitch in time saves nine."

CUCUMBERS, MELONS, &C.

Cucumbers and the different Melons should be planted without delay. Put in each hill a good shovel full of compost or the manure from an old hot-bed, and mix well with the earth, which should be a light loam, if to be had. The hills for the Cantaleupe should be six feet apart, and supplied abundantly with the fertilizing material.

WATER-MELON.

To the Water-Melon a very light soil is essential, and if your garden soil is not of that character, it is better to seek it elsewhere, or holes twelve inches deep and two feet across should be made and filled with light soil and compost. Plant a dozen or more seed in a hill, and thin to two after the plants are well established. The hills should be eight to ten feet apart.

SQUASHES, PUMPKINS, &C.

These should be planted with plenty of manure as above, and should be planted separate from each other and the other vines, if you would have seed kept pure.

CORN.

Corn for table use should be planted every two or three weeks for a succession of crops. For early planting a light warm soil is much best.

CABBAGES.

The Early Yorks and such others as have been

planted out will require working and attention. If seed for the late main crop have not been sown, it should be done now. Red pickling Cabbage and Savoys should now be planted.

BEANS.

The varieties of Kidney Beans should be planted from time to time for a succession of crops.

CAROLINA AND LIMA BEANS.

Crops of these fine vegetables should be planted, sufficient to ensure abundant supplies. The Carolina is smaller than the other, but earlier. Plant four to four and a half feet apart each way, manuring with good compost in the hill.

PEAS.

Continue to sow a succession of garden Peas from time to time.

LETTUCE.

Sow Lettuce seed for fresh supplies of plants.

CARROTS, PARSNIPS AND BEETS.

It is not too late to sow seeds of all these still, though they should have been sown earlier.—Keep the weeds and grass out carefully as they begin to come up, and thin out the Carrots to six, and Parsnips and Beets eight to ten inches apart.

CELERY.

Sow Celery seed in a rich, moist place, and be sure to secure abundant plants for main crop to be planted in July.

ONIONS.

Thin Onions, of which seed has been sown this spring, to three inches apart, and keep the grass most carefully picked out.

TOMATOES.

Plants from hot beds may be set out about the tenth of the month, and seeds for late bearing plants may be sown at once in open border.

EGG PLANT.

Egg Plants may also be set out from hot beds about the middle of the month, in warm, rich soil, and seed sown on a warm border for late use.

RED PEPPERS.

The varieties of these for pickling, &c., should be sown now for main crop.

TURNIPS.

A few Turnip seed may be sown for table use.

SALSAFY OR VEGETABLE OYSTER.

Be sure to sow seed of this vegetable. Sow and treat it as directed for carrots.

WATER.

A supply of water is essential to a good garden through our hot, dry summers. Make an effort to be prepared for it.

Diligence enforced by energy, should be guided by good judgment.

THE FRUIT GARDEN.

PEACH, APRICOT AND NECTARINE TREES

Should have their superabundant fruit thinned out this month. The Peach is especially prone to overbearing, and should be unsparingly thinned when necessary, if you would have fine fruit. The frost has, however, done this work quite sufficiently this season, as a general thing.

NEWLY PLANTED TREES.

Do not fail to water newly planted trees, occasionally throwing the water well over the tops and leaves. Water late in the evening or very early in the morning.

STRAWBERRY BEDS.

Strawberries require much water while setting and forming their fruit, and when practicable it should be applied freely.

NEWLY GRAFTED TREES.

Examine such trees as were grafted last month, and such as are well united, as shown by the free shooting of the grafts, the clay and bandages may be taken off. All shoots starting from the stock below the graft should be promptly removed.

THE FLOWER GARDEN.

The Flower Garden becomes now of especial interest and commands the closest oversight and care. The lawn and walks should be kept in strictest order—the former by close shaving whenever the grass can be taken hold of by the scythe, the latter (supposing them to be of gravel) should be rolled and swept once a week. The borders and beds of flowers will be kept clear of grass and watered and stirred frequently.

Roses and all Shrubs and perennial plants (which should be subjects of perpetual care) will now be, many of them, repaying you by their beauty and fragrance.

DAHLIAS

Should now be in the ground with plenty of good compost.

ANNUALS.

It is not too late to sow still the seeds of many choice and showy Annuals, which contribute so much to keeping up a succession of bloom.

Of green house plants, GERANIUMS, CINERARIAS, CALCEOLAREAS, LANTANAS, &c. will exhibit at this season a mass of bloom. Remove all not in bloom to the open ground.

Begin now the operation of preparing plants for next year's blooming, by re-potting, heading in, and starting with a bottom heat, Euphorbias, Poinsettias, Gesnera Oblonga, &c.

CAMELLIAS

Should receive a liberal supply of water, syringed over the leaves. Near the close of the month, place them out of doors in a cool, shady spot.

CHINESE PRIMROSES

Should be propagated by cuttings. Seeds of the single sorts should be sown for the next year's bloom.

HEATHS

May be put into larger pots and in a frame and protected from hard showers.

PELARGONIUMS,

Which are now coming into bloom, should be watered prudently, and fumigated if the green fly attack them.

FUCHSIAS

Should be kept where the hot sun will not strike them, and have occasional waterings with liquid manure.

GLADIOLUSES, TUBEROSES, CARNATIONS & PICOTEES

Should be planted out.

CHRYSANTHEMUMS,

To ensure a fine bloom, must be kept well cultivated in rich soil.

Flowers for Summer and Fall.

It is not yet too late to ensure a full supply of beautiful flowers to cheer and enliven the homestead throughout the season. Let no one who owns a quarter of an acre be without them, and let every child—boy and girl—be taught as a part of their education to tend and take care of them. We are indebted for the following to an experienced gardener, who communicates it to the *Valley Farmer:*

A comparatively small flower garden or yard, may, by a judicious selection of kinds, and the exercise of a little skill and care in their management, be made to produce a very happy effect. A half dozen flower beds, cut out of the green turf, or a four or six feet border, skirting a walk to the house, or by the fence, if well stocked and neatly kept, may be made to contain a great variety, embracing a good succession of bloom, and afford more real pleasure and satisfaction than a large rambling place, illy stocked and slovenly kept. A little farm well tilled, is the farmer's motto; and a little garden, well filled, is ours. Not to crowding or suffocation, of course, we mean; nor that a large place, equally well kept and planted with the small one, is not its superior. But what we want to show, is, that a large garden is not absolutely necessary to the possession and enjoyment of a great and good variety of flowers.

We started with the intention of offering a few hints as to which are good things to afford a succession of bloom all through the season. First come the hardy bulbs, and after them the bulk of the hardy herbaceous perennials, and then spring and the gayety of the flower garden are over, without we replenish it in part from the greenhouse and by annuals.

Of course we don't mean by this that there are no flowers to bloom after spring is over, because there are some scattering all through the summer; but the first grand rush is over, and from a host of bloom, it would dwindle down to a few at a time, were it not for the new beauties raised under glass and ready to turn out to commence their summer's work just as soon as the weather is fit for them to venture out.

Roses, Verbenas and *Phlozes* are indispensable—every lady knows that; and these three, of themselves, would not let the garden become dreary if they were abundant. But there are others which form a good variety, and are little inferior to the favorites, for brilliancy and lasting quality. Prominent among these is the *Petunia*, which seems to enjoy the glare of the summer's sun, and blooms on in great profusion and brilliancy; but the most decided and striking colors should be chosen, as the deep crimson, pure white, or strongly marked, variegated varieties, (and we have now plenty of double ones of all colors,) thus doing away with the flimsy appearance of many of the single ones. The *Heliotrope*, with its modest, unpretending flowers, of such delicious fragrance, must not be left out, or you lose a rare treat for the sense of smell, all the summer. All the scented *Geraniums*, for the same reason, must be chosen; a leaf or two of them, mixed in the boquet, adds another charm to it, not possessed before. The *Scarlet Geranium* class, for their gorgeous foliage and brilliant flowers, must be added.

The *Ageratum, Mexicanum* and *Celestinum* form a charming bed of blue, blooming all through the summer, and making large bushes. While the *Nerembergias* are equal to the Petunia in their enjoyment of the sun, and are constantly covered with their silver-shaped, pale lavender, blue flowers. Next should stand the *Featherfew*—pure white and double flowers, of long continuance, and one of the best for our purpose.

The *Lantanas*, of several varieties, are very pretty, though not equal in habit and abundance of bloom to some others, are still worthy of a place in the summer garden. For shady and moist situations there is the *Daisy, Pansy, Forget Me Not, Lobelia, Violet* and *Musk Plant*—all these afford a pretty variety of sweet and beautiful flowers. Among the annuals none are better than the class of *India* and *China Pinks*—plants of exquisite beauty and fragrance; and all the whole family of *Carnation Pinks* and *Picotees* are unsurpassed for both these qualities. The *Cuphea Platycentra* and *Antirhinum* should not be forgotten; and as we approach the fall months nothing can exceed the brilliancy of the truly gorgeous *Salvia Splendens Major*—a mass of dazzling scarlet—or the rich, deep, sky-blue, of the *Salvia Patens*, which blooms pretty freely in a moist, somewhat shaded situation. There are a great many more we might mention, but the *Asters, Dahlias, Chrysanthemums*, and last, *Roses*, must wind up our list of names for the present.

To Cure Poison from Ivy.—Rub the part poisoned with sweet oil. A small portion rubbed on the skin before going among the ivy will prevent taking poison.

How they Serve us at the Baltimore Cattle Scales.

To the Editor of the American Farmer:

I sent to a city daily paper, during the recent session of the Legislature of Maryland, an exposition of the impositions, abuses and combinations against the farmer at the Maryland Cattle Scales in the city of Baltimore—but its columns were so absorbed with Brock and the City Passenger Railway, that it appeared to have no eye or ear for any other abuse or interest in the State, and the opportunity was consequently lost to bring the subject to the attention of the Legislature and the public, to secure the reform so much needed in this important branch of the trade of your city.

Dr. Franklin said, "take care of the producing classes, and the country will prosper." England has adopted and carried out this wise and fundamental principle of State policy, and no country compares with her in national greatness and prosperity. France, under the patronage of her imperial monarch, is said to be advancing rapidly under the same system of state policy. The United States, the individual States, and especially the State of Maryland, takes care of the politicians and speculators, and leaves the producing classes to take care of themselves, and subject to such abuses and impositions as is the object of this communication.

Among the most important branches of farm economy is that of raising and feeding cattle—and whether viewed in its domestic, commercial or national aspect, it will be found eminently worthy of encouragement and protection. In 1858, there were offered at the State Cattle Scales in the city of Baltimore over 45,000 head of beef cattle, worth upwards of $1,000,000. Fair dealing in so large an item of trade, and one so absolutely necessary to your daily supply, is as important to the consumer as to the producer.

The past winter I fed 18 fine bullocks, 17 of which were driven to Baltimore market. About 20th January I had occasion to have four of them weighed on one of Fairbank's new patent cattle scales, erected about two years before in the neighborhood, four miles distant from my residence. The weight of a pair of old oxen was 2,900 lbs., a young do. 1,365 lbs., and an average steer from the balance of the lot 1,295 lbs. These cattle were fed on to the 21st February, and ought to, and no doubt did gain considerably by the additional month's feeding. On the 23d February they were sold and weighed at the Baltimore Cattle Scales, with the following result: Old oxen 2,680 lbs.—loss 220 lbs.; balance of the fifteen 17,760 lbs., average 1,184 lbs.—loss on each steer 111 lbs.

Two years before, I fed and weighed heavier cattle on the same scales, without additional feeding, (one of them weighing 1895 lbs.) and drove to Drover's Rest, above Georgetown, when the loss proved to be only 40 lbs. each. Allow no gain for my additional month's feeding, and my loss in weight by sending to the Baltimore Cattle Scales, over the Georgetown scales, is on the old oxen 140 lbs., and on the 15 other cattle 1,065 lbs., which, at the price sold, (3¼ for the oxen,) is a loss of $4.55; 4½ for the 15 steers is a loss of $47.92—total $52.47. Just $8.92 more than the gross sales of one large ox, out of my small lot of only 17 head.

Next comes account sales, for it is so arranged now, I understand, in Baltimore, that a farmer cannot sell his own cattle except at very considerable reduction in prices, but is taxed to maintain another class who stand between him and the butcher, and then, in addition, must submit to a large profit to the butcher (often equal on a single bullock to the gain on a whole year's grazing and feeding to the farmer) before his beef reaches the consumer. Hence the large fortunes rapidly made by your city butchers. But to the account sales:

17 Cattle sold for account, &c., viz:

2 to ————,	weight 2,680 lbs.,	at 3¼	$87.10
8 to Committee No. 1, "	9,580 "	4½	430.90
7 to " " "	8,180 "	"	368.10
	Gross sales.....		$886.30

CHARGES.

Weigh-bill.....	$4.08	
Feed and board.....	7.33	
Commission.....	25.86	
		$37.27
Net proceeds.....		$849.03

Now whether this Committee No. 1 be a combination of "Plugs," or "Dead Rabbits," or "Black Snakes," or "Bloody Hands," this aforesaid account of sales sayeth not; but certain it is, it is just as alarming and terrifying to the interest of the producing classes (the farmer and grazier) as the "Plug Uglies" ever were to the most timid democrat who ventures from the county within the precincts of the orderly and peaceable city of Baltimore.

Next let us analyze this commission of $25.86 to see how it is made up, and for what large amount of trouble it compensates. First, feed and board bill is paid by the drover—to this no objection is made. Second, weigh-bill is paid also by drover—I presume according to custom and also right. Then comes the services of the commission-man—a sham barter with a few out-

side butchers, probably a member of the aforesaid Committee No. 1—can't sell—then he espies his man. "Mr. Chairman of Committee No. 1, I have a fine lot of beef cattle, what will you give me for them?" Mr. Chairman of Committee No. 1 inspects the cattle,—"not very good, Mr. Commission-man; hav'nt had corn enough; that fellow is staggy; this bullock is rough, will not tallow well." Any how I will stand 4½ for them. "They are yours, Mr. Chairman of Committee No. 1; drover, come in and let me make out account of sales; I suppose you know that we pay *only* in Virginia funds." The unsophisticated countryman has by this time got a little insight into the ways and doings of Baltimore city clubs, and he dare not demur, and quietly submits to what he sees he cannot control. Bill proceeds; commission-man stops to calculate:

17 Cattle at $1.25 per head com. (equal in amount to 1 month's grazing) is	$21.25
½ per cent. for COLLECTING money on gross sales is	4.43
Paid by *check* in *Virginia funds*, (which being at a discount of ½ per cent.) is	4.43
Add loss in weight, as above shown	52.47
Thus by loss in weight, com. for selling, com. for collecting, and payment in depreciated currency, the total loss is	$82.58

And the farmer and drover is glad to escape from the State Cattle Scales in the city of Baltimore, minus nearly the value of two large oxen, for the privilege of selling a small lot of 17 cattle thereat, after paying within a small fraction of two dollars per head compensation to the commission-man for his valuable agency in selling his cattle to the Hon. Mr. Chairman of Committee No. 1 of the Baltimore City Butchers' Club.

A VICTIM.

Toads in the Garden.

A correspondent writes to us that he has always been at a loss to account for the existence of that uncomely reptile, the toad, supposing indeed that all created things had a mission to perform in the world; but he has lately discovered the use of the toad, namely, *he is a destroyer of lice on cabbages*. He says he is accustomed to keep his cabbages clear of these pests by collecting toads and letting them loose among them. This may be new to some, and it is certainly worthy of trial by any, The toad has other uses than this. He is an enemy of every species of insect, and his services are far greater than we are ready to accord to him. We have before published articles setting forth the merits of the toad, and we now take occasion to warn all against his destruction; we know of no harm he does, but we do know he has a thousand merits. We hope to see the toad appreciated in this country as highly as in Europe, where it is considered worth while to purchase them, even at a considerable expense.—*Ex.*

Peach Crop.

To the Editor of the American Farmer:

SIR: I believe it is generally conceded that the severe weather of the past winter has produced an almost total destruction of the peach crop, and from the frequent casualties of a similar description, it is incumbent upon us to endeavour to discover some means of averting the evil in future. In walking through a very flourishing young orchard this morning, I observed a large number of blossoms on the limb of a tree which had been partly broken off by the storm last fall. The limb was two-thirds broken off, and held to the tree by the under portion, which allowed the passage of the sap to the extremities, lying on the ground, where the blossoms were. I have always advocated the system of training fruit trees in such a manner that the wood may be as near the ground as possible in preference to long bare trunks, and from my observation of this morning I think I have found an additional argument in its favor. I therefore write these few lines in the hope of inducing others to try the experiment with some of their very young trees this season. Instead of letting a single shoot run up, I would suggest that it be topped off very low, so as to compel all the lower buds to shoot out. Independent of the advantage that this method may have in protecting the fruit against the severity of our winters, it has many others. The tree is less liable to be broken down by storms, the fruit is much easier gathered, the ground is kept more moist, and the tree is better protected from the intense heat of our summer sun. Most cultivators in this country are too much inclined to adopt the English method of pruning, whereas I contend we should practice the very opposite system. The English climate is so wet and damp that it is necessary to prune out all the inside wood in order to let in the little mild sun and air they have in that climate, but the air and sun in this country are too scorching, and therefore the tree should be so pruned as to protect it from the direct rays of the sun. Again—if a tree is pruned in this manner, it would be a very easy matter to protect it, at least partially, with pine brush placed in amongst the limbs.

CHAS. B. CALVERT.

Maryland Agricultural College, April 2, 1860.

The method of pruning here suggested by Mr. Calvert has commended itself, we believe, to the experience of many of the most successful fruit growers in the country. So much so, indeed, that we see nothing said of late on the contrary side. No one seems disposed to uphold the old

method, whatever his opinion or his practice may be. There seems to us, however, several objections as regards the Peach orchard, to this system, which should not be overlooked. One is that in the cultivation so essential to this fruit, the low branching system throws the plough so far off from the trees, as to leave the work imperfectly executed, or to make a great deal of extra labour with the hoe. Another is, that with the branches shortened back the top of the trees, as the fruit increases in weight and approaches maturity, does not lie open sufficiently to the sun to colour and ripen handsomely the fruit. Again, does it not admit of question, whether, with the same quantity of fruit, a staunch, unyielding branch will not break sooner in a storm, than a swaying, yielding limb. These suggestions have reference only to peach orchards and seem worthy of consideration.—Ed. of American Farmer.

A Fatal Disease among Poultry.

Mr. Editor: A very fatal and singular disease is and has been prevailing among my poultry for five or six weeks. This disease appears first in the mouth and tongue, then the eyes and whole head become affected with ulcerated sores, till the throat and windpipe become closed, and the fowl dies. Not more than one in ten recovers from it. Young and old are alike affected; I had a brood of thirty fine and apparently healthy young chickens; the old hen was attacked with the disease a few days after she was put out with her brood, she lingered about three weeks and died, leaving her young ones to take care of themselves as best they could. In a short time they became affected, and now, after getting to be six weeks old, are dying daily, all of them having the disease. This plague (for I know of no other name to give it) has extended to my flock of turkeys also; the geese, as yet, manifest no symptoms of the disease. My great fear is, I shall lose my entire stock of fowls, in the growth of which I have been very successful, having been engaged in the business for twenty-five years, during all of which time I have seen nothing like it. This disease prevails in the vicinity generally, but not so fatal anywhere as with me. Will you or some of your numerous correspondents and poultry-men suggest a remedy, if any is known, and confer a favor on the community.

M. D.

North side of Severn River, A. A. Co., April 7.

[We will thank any one of our readers for information with regard to this disease, and a remedy.—Ed.]

[For the American Farmer.]

Felspar, Change of Pasture, &c.

With regard to Felspar, to which my attention has been called by the interesting communication of your correspondent, R. D. H., I have to say that I fear that he is too sanguine in believing that gypsum and felspar would "contain all the inorganic constituents of plants." The soil on which I farm is marked by a granitic formation; upon it we find felspar, mica, hornblende, &c. The soil on which the felspatic formation predominates is fertile and very much improved by the liberal application of gypsum, producing the most luxuriant clover, running readily, if undisturbed by the plough, into a thick sod of blue grass and greensward, and if the clover lands are put in wheat, they produce, under favorable seasons, a most magnificent growth of straw, but with a yield of grain by no means in proportion to the quantity of straw—and this I have always attributed to a deficiency of phosphates in the land. I should be happy to find I was mistaken, however, and that the idea of R. D. H. was correct.

With regard to change of pastures on blue grass sod, for beef, after an experience of nearly twenty years, I am decidedly opposed to it, and I am inclined to think that shade trees are very useful to grazing cattle, although I have met with those who maintained the opposite opinion.

FAUQUIER.

P. S.—I am self-taught with regard to my geology, and may possibly apply the wrong name to some of the formations mentioned above.

Mixed Stock in Pasture.

I noticed, some time ago, a good deal written about keeping a mixed stock on pastures. As I have been a keeper of stock from very early youth until now, I venture to give my opinion. And first, I have found sheep do very well amongst cattle, but cattle do badly amongst sheep. To prove it, let the farmer take the fodder left by the cattle, even when part of it has been trodden under their feet, and if the sheep are not very fully fed, they will see the sheep eat it up very greedily; then let him take what his sheep leaves and offer it to his cattle, and he will find they won't taste it, if they can get anything else; or let him turn his milk cows in a sheep pasture, and he will find them fail in milk. Cattle do well where horses pasture. In proof of this, every farmer must have seen that cattle will eat the litter of horses, even if fully fed, but horses won't eat what cattle leave, unless compelled to do so. But horses and sheep will do well in some pastures, especially the horses. To prove this, let the farmer turn out the sheep from their yards, turn in his horses, and they will eat up all the sheep have left, even the litter around the racks.—John Johnston, *in Ohio Farmer.*

The Heroes of Peace.

It is an old saying, that has been often repeated, that the man who makes two blades of grass grow where but one grew before, is worth more than the whole tribe of politicians, warriors, &c. But where is the reward they have earned? Where is the honour that is due them? Politicians are honored day by day by high offices and emoluments, tendered them by the voice of the people. Warriors are praised in tones louder than their own trumpets, or the big guns they have wielded; and not only so, but our legislatures vote them freely, not stars and garters indeed, but very costly swords. But what clamorous multitude honours the hard handed farmer, for victories worth so much more than the achievements of politicians or warriors? What legislature has ever voted so much as a laurel wreath to crown the brow of one of these heroes of peace—these men who use the plough-share instead of the sword, and whose strong right arms strike only for the triumphs of peace?

These thoughts occur on reading an article kindly sent us by a friend in Delaware—a portion of which we copy below—who has thought proper to give the names of a few of the men who, in his own State, have shown what may be done in the way of making two blades of grass grow where but one grew before. Why may not our little neighbour State set an example to her sisters, by making enquiry as to him who deserves most at her hands in this respect, and by some substantial token of approval, signify that "thus it should be done to the man" whom she "delighteth to honour."

The following is the extract:

Mr. Joseph Frazier, residing on a farm in District No. 40, which he purchased nine years ago for eight dollars per acre, raised last year about 400 bushels of wheat, using four tons of guano, and 1,600 bushels of corn without guano or other fertilizer, except manure of the farm-yard; and this land was prepared and cultivated entirely with *two* horses, which also performed wagon and carriage service of the family. If any farmer in New Castle has raised more corn with two horses, let us hear from him.

Martin and John S. Harrington, two brothers, residing on an adjoining farm, which they purchased eight years ago. At the time they purchased it (thirty acres were in corn) they received the rent, one-third, which was 60 bushels of nubbins, being less than 30 bushels of corn. Last year they harvested 1,100 bushels of wheat, between 400 and 500 bushels of oats and 1,200 bushels of corn. Their cattle luxuriate in summer on clover to their knees, and in winter in well-filled racks of the same. In fact they are model farmers.

John Quillen, in the same district, is another model farmer, who has also fine and commodious buildings, and has raised a sandy and almost barren farm to a state of productiveness that is highly creditable. The amount of his crop last year we have not yet learned, but he raised one year 800 bushels of wheat and 2,000 bushels of corn.

James Sharp, in the same district, is fast elevating the character of another worn-out farm, and James Postles, in the same vicinity, has reclaimed another comparatively worthless farm, on which he has built a commodious mansion and large barn, and other out-buildings, and has fine clover fields, where, but a very few years ago, pine had undisputed possession.

Samuel Draper, on an adjoining farm, is also renovating another tract of exhausted land, as fast as time and circumstances will permit.

John West, in the adjoining Hundred, is another member of the Agricultural Advance Guard. He resides on a farm near Frederica, which was, when he purchased it, *minus* everything except *terra firma*, and a lot of black oak timber, which, by the way, was a very convenient attachment when bark was $12 per cord. This farm, when Mr. West bought it, was yielding about 550 bush. of corn to the field, and 250 bushels of wheat. Last year he raised on the same field, without guano, 1,600 bushels of corn, 40 bushels per acre—and on another field 792 bushels of wheat, using four tons of guano. His best crop of corn was 3,500 bushels. He mows from 15 to 30 tons of hay. He has erected a comfortable and showy mansion, spacious barn, with all necessary outbuildings, all new and well arranged. He is one of our *nice* farmers.

We had liked to have passed our friend, John Emerson, who is emphatically another of the same sort, and who, by the way, has, or will have, the best field of wheat in this region. This was also a worn-out farm, which a few years ago would not have brought more than from three to five bushels of corn per acre, and the tenant had an excellent chance to lose the seed if he sowed it in wheat.

Capt. James Green is another of our go-ahead farmers. He also purchased a farm, some years ago, that was on the sick list. Some portions of the land would not raise five bushels of corn to the acre, which had on it last year at least 60 bushels per acre. His field averaged nearly 40 bushels per acre; his whole crop was 1,900 bush. of corn, without guano, and 900 bush. of wheat.

Choice Double Petunias.

Double-flowered Petunias are of very recent introduction and exceedingly interesting. They do not bloom so profusely as the single varieties, but their novelty is very exciting. We do not claim for them the merits that some have done: "as large as roses, and nearly as fragrant." The following are the very best:

Imperialis, white.
Imperialis Purpura, pale purple.
Erlinda, rose pink.
Van Houttii, pale lilac.
Azora, white, with violet shaded.
Dr. Lindley, purple.
Red Cross Banner, dark purple.

The most beautiful single variety is Petunia inimitable, bright purple, marbled with pure white.—*Buist's Almanac.*

Composting Manures.

Every gardener understands the value of well made composts, but agriculturists on a large scale are not generally convinced of the propriety of handling a large body of stable and other manures, so often as would be necessary to make them into compost. Indeed very many hardly take the necessary time to haul to the field the accumulation of their yards. We are aware, however, that it is customary in the Cotton States to manufacture very large quantities of compost, by mixing the stable and pen manures with any earth (of course the richer the better) at command, and the most intelligent planters seem convinced of the great additional value given to these manures by the process. A compost of one load of stable manure and two of earth being equal to three of uncomposted stable manure. If it be true, or nearly true, that our domestic manures can be thus multiplied, it is a fact which should be universally known. We always treat with due consideration the observations and experience of intelligent practical men, but we will not say we are yet convinced on this point. In the communication following, which we copy from the *Southern Homestead*, it will be remarked that the compost is made on a knoll, presumed to be the poorest part of the field, and the earth from this spot is shoveled on to the manure at the rate of two loads of earth to one of manure, and the writer asserts that when used, the three loads thus made are equal to three loads of the uncomposted stable manure:

For more than ten years I have practiced composting a portion of my manure (from 400 to 600 loads yearly) by selecting a knoll or a little rise of ground in the lot to which I wish to apply the manure. I commence in the spring of the year by plowing—if it is turf-ground, about two inches deep, and either pile up the turf into heaps or cart it into the pig-pen—at the foot of the rise of ground, then cart the manure and drop a load in a place close together. Then plow on the upper side of the manure and shovel at least two loads of earth upon one of manure. This leaves a space between the manure and the bank; cart more manure and drop it in the space or hole, ten, twenty, or more loads as you please, then plow and shovel as before. Continue this mode of operation through the season as the manure accumulates. Do not disturb the compost heap in any way, but let it remain till you wish to use it, or shovel it over a few days before carting; or my practice is, in the fall of the year to commence at one of the compost-heaps and cart it on to my mowing lands; in this way the earth and manure are well mixed and ready for use. If the compost-heap had been shoveled over, the earth having absorbed the ammonia of the manure, the goodness would have evaporated and have been lost in the air.

Thus I make three loads of manure out of one, and my experience is that it is equal or even better than three loads of stable manure. The more I try it the more I am convinced of this fact. The manure I use is carted from stables not having any floors to them, using plenty of straw, thereby saving all the liquid manure. If allowed to remain in the heap till spring, three loads of it will make more corn than three loads of stable manure. This method saves time and team labor, as it gives three loads in the field by carting one, making three dollars' worth of manure for one dollar's worth drawn into the field.

All dead animals covered in this way make good manure—the carcase of a horse, for instance, placed close to a hill or knoll, with a load of straw manure and eight or ten loads of earth thrown over it, makes a pile of excellent manure worth at least ten dollars; which is much better than to throw it into the river, as formerly practiced.

Earth or muck enough to absorb all the juices of the yard pays well, as it makes an excellent manure, and it takes from 200 to 300 loads a year to use up the juices of my yard.

Culture of Horse-Radish.

In nearly every garden, the horse-radish is stuck away in some stony or obscure corner and left to grow for years, producing roots only the size of a finger, and rank and acid in taste. The way to grow it to be palatable and in one year to be the size of a man's wrist is as follows:

Select a good sunny piece of ground; dig it early and deep; mark off the rows, 3 feet, and put along the row as much manure as for celery; draw the earth from both sides over the manure, and with a crooked cedar stick, plant the roots standing almost horizontal in the manure, so close, that the roots of the second plant are close under the first one. The roots to be planted should be finger-thick, about 12 to 16 inches long is most convenient; get them out early in April, and rub or scrape with a knife the whole length to within ½ inch of either side; in the latter part of May or beginning of June uncover the roots; and all the little roots, except the lower ones, have to be rubbed off; as also all the shoots and heads but one, and to be covered up again. It is beneficial to tear the big leaves off, and, September repeat the operation, and by setting in of cold weather you will find thick and tender roots, which sell here in New York, from 10 to 12 cents apiece.—*Gardener's Monthly.*

Soaking Bean Poles and Raspberry Canes in Chloride of Zinc.—Take three pints of chloride of zinc to half a barrel, or about sixteen gallons of water. Set the poles upright in this liquid, and they will be ready for use in about a week.

The above receipt for preserving wood from premature decay, I have tried with good success. The poles which I use are of maple, white birch, poplar, walnut, &c., about an inch in diameter; they were cut eight years ago this spring; have been used seven summers, and still remain sound.

Fence posts, spouts, shingles, &c. are benefitted in the same way. Druggists supply the article, if others wish to try the experiment.—*Correspondent of Ploughman.*

Butter Made Out of Starch.

The following popular exhibition of this idea will be both interesting and instructive to those who study "the natural sciences" or *wish* to cultivate such knowledge:

To an Enropean chemist is *apparently* due the discovery that severe illness of stock is sometimes occasioned by the presence of butyric acid in the water they drink, that has drained from a mixture of vegetable and animal matter during fermentation. [See note.*] Le Verrier is said to have discovered a planet that was first seen by another; and Liebig anticipated the discovery of the organic radicals. Upon this principle, your correspondent may claim the above, as follows:

During March of last year, the following communication was addressed to Prof. Chas. G. Page, of Washington, D. C., and is now on record as a part of the patent, No. 25,772: "Starch and woody fibre or lignin are usually converted into carbonic acid and water when they decay in the air; sometimes into gum, sugar, alcohol, &c.; but when associated with animal matter at about 95 deg. Fahrenheit, they are converted into lactic or butyric acids, or more fixed products which remain in the compost." [See note.*]

Butter is the only glycerid (or fat) that chemists can make artificially, and I think that some of the agricultural community will feel interested to know how a chemist, as well as a cow, can make butter. Starch is the first step in both cases. Have you never seen a starch granule? If not, employ the first microscope, and the little pearly gem will well repay you. This microscopic but perfect organism may be called the seed of the butter. Gum and vinegar are both made out of starch. The former was formerly derived from the deserts of Arabia, and the latter varied in price with cider. Every one has noticed the sweet taste of the gum on post office stamps. This is sugar that is made out of starch, and if the simple process of making starch into gum were protracted, the whole of the gum would be converted into sugar. The starch in the potato in the spring, and that of the unripe pear, is converted into sugar, and both become sweet spontaneously. In the stomach or abdomen of all men and animals, all the starch they eat is converted first into gum and then into sugar. Old persons sometimes, and persons suffering from diabetes, pass off sugar in proportion as they eat starch.

Thus far the cow and the chemist agree, but there is some question about the next step. Every one is familiar with the acid of sour milk or lactic acid. The same acid exists in "sour crout," and is spontaneously formed out of sugar when fermented with chalk (by means of a little curd to start the fermentation.) The whole of the sugar is now converted into lactic acid, and exists as lactate of lime. Nothing more is required than a little time and a temperature of 95 deg., in order to have another fermentation spontaneously ensue, called the butyric fermentation, which converts all the lactic into butyric acid or the acid of rancid butter. Butter is "a salt," composed of an acid and a base like common salt. Separate these, and a very different taste, and smell arises in both cases. When butter, or lard either, becomes rancid, the acid separates from the base. Glycerin is the base of all true fats, whether olive oil, tallow, mutton suet, or butter; consequently, it is only necessary to get some glycerin out of olive oil, and combine it with the butyric acid that we have made out of starch, and we have butter.

In the *N. Y. Observer* of January 5th, Prof. Johnson, of Yale College, claims for Mr. Pusey, of England, the mode of dissolving bones by their fermentation with vegetable matter, *as there described*. In the patent above referred to, I swore that I was the inventor of *the* process by which bones are dissolved without risk to the health of the neighborhood: *part* of Mr. Pusey's process is so much like mine, that if it did not come from such good authority, and through such good hands, I should suspect it was copied from the Patent Office. But I consider Pusey's an unsafe process, apt to generate typhoid fever, (as fish composts do.) Nothing is more mischievous than the exhalation of a mixture of animal and vegetable matter, although either, alone, is comparatively harmless. Mr. Samuel T. Earle, of Centreville, Queen Ann's county, Md., was the first to call my attention to the solution of bones by fermentation with vegetable matter.—In September, 1849, (*more than ten years ago*) I bought some ground bones for my farm, and about the same time (say in previous spring) he purchased some from the same man, and asked me to account for their conversion into a pasty mass while lying *in bags* in his barn.

I can account for the strength of the delusion that is produced by the duality of the brain, or "spiritual manifestations," where one brain is conversing with the other in the same skull. I can also account for the association of ideas by which two persons in the same room read each other's thoughts; but I cannot account for these parallel claims—originating in several parts of the world, and expressed in nearly the same terms, unless it is the inspiration of the same great mind that gives understanding even to the simple. When a mere boy, more than twenty-five years ago, I undertook to discover the alkaloid, or proximate principle of persimon bark, and called it diospyrine; but some man in France published the discovery that he had made of the same principle before my paper was prepared. Next I tried the tulip poplar, but Lireodendrine was discovered by some one in Pennsylvania. Third, the holly bark was suggested by the late Prof. Potter; but here I was again anticipated. Ilicin was almost immediately announced. Why should the world sleep over oxygen and chloroform, &c. for five thousand years, and then produce each twice within one year?

DAVID STEWART, M. D.,
Chemist of Md. State Ag. Society,
St. John's College, Annapolis.

*It is a singular coincidence that the Frenchman, M. Isidore Pierre, should publish his paper in Comptes Rendus, on August 22d, 1859, page 286, while mine was in Washington on Saturday, 5th March, 1859; but it is still more remarkable that he should say in his paper that he commenced his investigations *in March*, "*and afterward*" discovered the Butyric Acid in the dung heap. It is still more difficult to account for the fact that he seems entirely to overlook the *other* sources of sugar in the manure, and attributes the butyric acid to some beets that were accidentally present, or rather to the *sugar* they contained. I have no doubt that the illness produced by cheese (that is improperly made) is due to the formation of Butyric Acid *in many instances*. D. S.

Manuring Pastures and Meadows.

We hold it to be nature's own way of enriching land, to apply the fertilizer, of whatever sort it may be, to the surface, what would be termed a top-dressing. We are aware this is debatable ground, and shall not presume to enter the lists, but simply give facts, as seen by us, and by all who, "having eyes, see."

The annual fall of leaves, decay of grass and other herbage, with the deposits caused by overflow, and the decay of the many forms of vegetation, are the sources of fertility and its annual increase. The soil which retains any considerable portion, or all that grows upon it, ought to increase in fertility. For this increase there are two great sources—the growth above the soil, from the root; and the growth in the soil, of the root itself. The one is an application of a fertilizing property to the surface—the other (the root) *in* the soil. The quantity of available plant food thus furnished by varied vegetable growth is widely different. Whoever thought of making a soil richer by growing *in it* a crop of wheat roots, while a crop of clover roots will increase its fertility wonderfully. The same is true of timothy, and, in fact, of any of the tough swarding grasses. All the farmer has to do to manure his soil well, is to produce a heavy, thick sward, the roots of which, when killed, in decaying, give out the constituent elements of a series of great crops and leave the soil the better for being in grass.

But how to produce this thick sward, is the question, on a farm where the huge, wandering roots of the old forest trees are all decayed and extracted from the soil, in the form of "product," and sold,—how to get a good coating of grass,—a good, tough sward, and its adjuncts,—where the soil is *run* poor, and will hardly grow either root or stalk. We answer, mix your grass seed, using varieties suited to the soil, and then serve the product as the "young dandies do their coaxed moustaches"—nurse, care for, treat with outward applications, &c., until it grows, and when once a stiff sward is formed, *make it rich by what you put on it*, and it will make you rich by what grows *in* and on it. That soil which will not, nor cannot, be made to produce a growth of roots for the support of plants, is worthless. We plow, hoe, and mellow the soil, that these may spread, and to these we should look, as the great source of fertility and means of fertilizing our soils. As the chief end of our labor, we should endeavor to make a root-growing soil—the root being the source of all or any share of success. How?

A poor soil may be fertilized by the application of manure spread upon it,—plowed in, if you will,—or by irrigation with water, bearing sediment. But a soil which had been rendered poor,—poor is a better word here than sterile,—by too long cropping from the same class of roots, we should seek to fertilize by change of product. And here we have to say, that a soil in grass, well swarded, is not poor, even if the crop is too thin and scanty to pay for gathering—any soil filled with grass-roots is like a loaded gun—it's ready to make a report! But if it has been,—as is the case with too many Western New York soils,—cultivated in exhausting crops, or those the roots of which die each year, instead of carting on manure and plowing in to be thrown out and carted off again the next year in a spasmodic or forced, or *boughten*, crop, we should adopt the seeding down practice, with red and white clover, timothy, and red-top, or blue grass, and then cart on the manure, what an increase of fertility we would observe. One bushel of plaster, and a few cords of manure, on even an exhausted soil stimulate to the production of a paying crop, with the soil better, instead of worse; for it is left filled with more cart-loads of fertilizing grass-roots than were added to it in the top-dressing. Another, and another year, but adds to the triumph, and renders certain the victory.

From the above we are inclined to class farm crops as the fertilizing and non-fertilizing. Grain and all annually sown crops, only requiring roots to perfect a few weeks' growth, return to, or leave in the soil, much less than is extracted, while grass crops, continuing in a growing state for a considerable portion of the year, give a much greater proportionate return to the soil, and are less exhausting. Hence, one of the chief sources of fertility of the Western prairies, and also of the celebrated recuperative powers for the soil, is by depasturing with sheep.

We have witnessed much upon this subject in the practice of the Hon. A. B. Dickinson, who, twenty years ago, purchased several farms, more or less exhausted. His business being keeping sheep and fattening, in pasture, cattle for the New York market, he kept these farms seeded in grass for several years, and, applying annually a bushel of plaster per acre, let them receive as a top-dressing the droppings of the animals and ungathered herbage. The result was, a sward was soon made which took "power" to draw a plow through it, and the productive capacity of the soil was increased fully three-fold. We have seen whole hill-sides which had annually been shorn of their product until in his possession, and were so much exhausted as to be *seeded* with difficulty, after lying in grass five years, as pasture, broken and give a yield of oats worthy any soil in the State.

It used to be the maxim of neighbor Moses,—now gone from earth,—to seed no more than he could give a dressing of manure, at the time of seeding, with the crop grown. This we consider poor policy, if the grass crop is sought to be benefitted, as it will produce a larger growth of straw to smother the young grass and absorb all, or nearly all, the manure, leaving the "new seeding" little better for the attention.

The whole truth is here: labor to fertilize your meadows and pastures,—a thick, heavy turf will do more toward permanently enriching your soil, than all your applications of manure to cultivated crops,—seed often and *manure your grass land*, and you will reap a return in two spires where but one grew before, and retain your manure hidden in the soil, payable to your order upon proper demand. Instead of plowing manure into the soil, put it on top, and let grass land vegetation carry it down. These are practiced principles, Mr. Editor.—*Rural New Yorker.*

The maple sugar crop of Vermont this season is estimated at nearly fifteen hundred tons. The run of sap this year has been remarkable.

The Dairy.

Mr. Charles L. Flint, Secretary of the Massachusetts Board of Agriculture, gave the fiftieth lecture of the course, on the management of milk and the dairy. He handled his subject systematically and simply, held his audience thoroughly interested, and communicated a great number of new and important facts in regard to dairy practice. Certainly it was one of the very best lectures of the course. One single fact which he communicated would, we think, be worth to every dairyman in the audience the price for the whole course of lectures; we shall refer to this in its proper place.

After speaking of the various constituents of milk, casein, butter, milk-sugar, water, etc., the lecturer spoke of the peculiarities of its secretion. The different teats of a cow often yield different quantities and qualities of milk. The hind teats usually give most. Different cows, fed on the same food, produce also milk differing in qualities. The same cow differently fed yields milk varying greatly in quality. The condition of the cow in regard to her calving, etc., affects also the quantity and quality of the milk. The frequency of milking affects materially the quality and the yield. The first milk of a milking is always poorest in butter, while the strippings are particularly rich in the same. On the same food the butter is whiter in winter than in summer. If the first, middle, and last thirds of the milk at each milking could be kept separate, it would facilitate the rising of the cream. Dairy farmers supplying milk to towns should keep none but healthy cows and feed only natural, healthful food. Various modes were given for detecting adulterations, etc. The specific gravity test by an instrument floating in the milk (a proper hydrometer, though called a lactometer,) is unreliable. The true lactometer is a series of glass tubes of the same diameter, and accurately graduated; in these, milk of different kinds is placed and allowed to stand till the relative proportion of cream and milk is perceptible, and may be measured. The color of the milk and cream of different cows may also be accurately compared in this instrument. This is an exceedingly important thing in a well-furnished dairy. A farmer in New York informed the lecturer he found by his lactometer that one of four cows which he esteemed about alike, as they gave nearly the same quantity of milk, gave as much butter as all the other three. The first cream that rises is the thickest and richest. Thick milk thinned gives more cream, but of inferior quality. When milk is drawn from the cow it has a temperature of 95°, and it should be strained and in the pans as soon as possible, so that there may be very little fall in the temperature before the cream has a chance to rise. Milk set for cream should be kept in a temperature of 58 to 62°. The dairy-room should be scrupulously free from any odorous gases; of course great cleanliness is indispensible. Milk, and especially cream, absorbs with astonishing facility any odors which may pervade the atmosphere of the dairy—the smells of the kitchen, etc. The cows should be adapted to the objects of the dairy—milk, butter, or cheese, according to the requirements of the market, etc.

In butter-making, cleanliness is truly all-important. The excellence of the butter depends more upon the making than any thing else—feed, cows, churns and all—though these have great influence. It is a well known fact that a good dairy-woman from a district celebrated for good butter will continue to make good butter, let her move to never so poor a dairy district; and the reverse is equally true.

A dairy-house should be at a distance from the barn and barnyard, and it should be well ventilated. As great a uniformity of temperature as possible should be secured; if in the basement of a house, it should be shut off completely from the house-cellar. There should be an earth floor, neither flagged nor cemented, for the earth is a powerful absorbent of odors and impure gases. Eighteen to twenty hours in summer and twenty-four in winter is as long as milk should stand.

The churning of whole milk is a great relief from care. Some churn fresh milk, others churn at noon, and others churn curdled milk. A square box hung upon an axle through the centre is one of the best forms for a churn. The butter will come as quickly as is desirable.

The hands should never come in contact with the butter in working. In regard to working butter, Mr. Flint described the following practice, which is entirely new to us, and we conceive most highly to be commended. It is in vogue near Philadelphia, where the quality of the butter is so celebrated.

A large soft sponge is covered with a light linen cloth, (probably a single thickness, and sewed on.) The butter is placed upon a working-board and worked with a roller. The sponge and the roller are used alternately, the former occasionally wrung out and rinsed in ice-water. Thus the butter-milk is most thoroughly removed, the temperature kept low, the butter hard, and the working very thorough. A ladle may be used to gather it into a ball before and during the working. It is difficult to conceive a more perfect operation; and whoever will follow this plan, using the requisite care in other particulars, observing great cleanliness, etc., will, we can guarantee, find his account in it.

Excess of salt is injurious and unhealthful as well as fraudulent. New pine tubs or boxes impart taste and odor to butter. Let them stand over night filled with a solution of carbonate of soda in hot water, and they may be used.

If cream be tied up in a napkin and buried in the soil twelve to fifteen inches deep and left over night, there will be found a ball of butter only, in the morning. Mr. Flint has tried it himself repeatedly, and we know of the same experiment having been made repeatedly with uniform success.

CHEESE-MAKING

Was somewhat minutely treated of, especially as regards the preparation of rennet and the various circumstances upon which the peculiarities of some of the most celebrated of the almost infinite variety of kinds of cheese depend. Old cheese, and particularly that in which a certain incipient decomposition has commenced, aids in the digestion of other food, if eaten in small quantities; hence its value with the dessert after a hearty meal. New cheese has not this effect, and is much harder of digestion.

The great value of skimmed milk for cheese

is not appreciated. Some of the most famous cheeses in the world are skim-milk cheeses, *e. g.*, the Parmesan. Instead of selling all the milk at two cents per quart to go to the city, it would be more profitable to make a nice quality of butter and skim-milk cheese, for both of which, if made with care, a sure and good market may be always found.

In some parts of the world, particularly in Switzerland and Germany, dairy associations exist among small farmers. The members of the association form a joint stock company and put up a dairy house for cheese-making on the most approved plan, hire experienced dairy-women, and maids, and men, according to the needs of the establishment. They bring daily their milk, which is measured and credited to them, and in proportion to the milk contributed are their profits. The cheeses are made of large size and great uniformity. They establish a reputation, and not only are the profits greater, but the good wives are relieved of much labor. The atmosphere of a dairy is said to be exceedingly grateful to consumptives, and many cures are related. —*Connecticut Hamestead.*

Tobacco.

There are two plants, the produce chiefly of the Southern States, the value of which, as commodities of export, equal all the other exports of the country put together, viz: cotton and tobacco.

Tobacco is indigenous to the soil of America, and has always shown a preference for the States of Virginia and Maryland. The tobacco plant is one of those sources of national wealth which nature has assured to us by a peculiar adaptation of soil and climate for its production, and which no other country, excepting perhaps the Island of Cuba, possesses in an equal degree. The tobacco plantations may be certainly calculated upon as yielding from thirty-five to forty millions of dollars annually. For the last forty years, the crop has shown a steady increase:—it is, however, chiefly during late years that the production has most largely extended. In 1821, the value of tobacco exported was $5,648,962, and for fifteen years the amount taken for foreign consumption continued to average about that value. In 1836 the export reached $10.058,640, and in 1841, $12,576,703, from which point it fluctuated down to about four and a half millions of dollars, until in 1846 the shipments amounted to $8,478,270.

The following table will show the annual export from that period up to present date:

Year.	*Value.*
1847	$7,242,086
1848	7,551,122
1849	5,804,207
1850	9.951.023
1851	9.219,251
1852	10,031.283
1853	11,319,319
1854	10,016,046
1855	14,712.468
1856	12,221.843
1857	20,662,772
1858	17,009,767
1859	21,074,038

The exports for the year 1859 were the largest of any period in the history of the trade. The amount shipped in 1857 was nearly equal, being less by only $412,266; but from reference to the table it will be seen that that was quite an extraordinary year. The average export for the twelve years ending with 1858 is about eleven and a quarter millions of dollars, which it will be observed is nearly doubled by the amount of last year. Nearly three-fourths of last year's export was taken by England, France, Bremen and Holland.

The amounts taken respectively by those countries is as follows:

Exported to England	$5,202,810
" France	4,302,170
" Bremen	3,985,178
" Holland	1,942,527

The remaining one-fourth has been exported to the several ports of the world in amounts varying from $30 to the Central Republic, to $940,448 to Belgium.

It is remarkable how universal is the demand for this product. The official returns show a list of one hundred and twenty-five different articles of export; and out of that number, with the exception of grain, there is not one that is shipped to so many different countries as tobacco. The Government report enumerates seventy-one different foreign markets to which our products are exported; and out of that number there are only six that do not buy our tobacco, viz: Madeira, the air of which is possibly too pure to be polluted by the fumes of the weed, Egypt, San Domingo, Greece, Bolivia and Equador; most of which places produce their own.

The value of the tobacco exported from the United States last year was nearly five times that of our sea products, fifty per cent. more than the products of the forest, not quite three millions of dollars less than the whole export of vegetable food, and rather over an eighth of the value of the cotton crop.

It is clear that the general taste for tobacco smoking is steadily increasing, whether to the public injury or otherwise we leave for those better skilled in the doctrines of narcotics than ourselves to decide. The fact is, that despite of King James' counterblast, and Urban's excommunication, and the ever-issuing anti-narcotic fulminations of our modern physicians, the people are most resolvedly intent upon having the weed; and this being the case, our tobacco planters will continue to grow it and prosper.—*U. S. Economist.*

Cholic in Horses.

A correspondent of the *Southern Field and Fireside* says:

I notice, in the last number of your paper, a cure for cholic in horses, contained in a letter from Mr. Thurmond, of Athens. Permit me, sir, to give you one much more simple and convenient. It is simply to pour cold water on the back of the animal for fifteen or twenty minutes. Pour the water on from the weathers to the loins, so as to run profusely over sides and stomach. I have seen it tried in fifty instances. It will give almost entire relief in one hour.

The decrease in the number of hogs packed in the West last season was 114,214.

Air Drainage.

When we first commenced advocating under-draining as a system, the editor of a prominent agricultural paper said of us: *"This writer will next advocate the under-draining and sub-soil plowing of lands where no excess of water exists."* This he thought a severe satire, and perhaps was much surprised at our reply, in which we assented to his assertion, stating that we already were prepared for such advocacy, and that we did not believe that any under-drain was properly made, that was not open to the atmosphere at both ends, so that a current of air would always be passing through it, entering at the lower and having its exit at the higher point; that no soil could be absolutely secure from drought without the assistance of such drains.

We now give the following from the *Farmer's Magazine*, and although it contains some ideas which we cannot endorse, still it at least registers the fact of what the experience of English farmers has been, in the under-draining of lands with the view of ærating.—*Ed. Working Farmer.*

The essential elements of vegetable production that are more or less under artificial control are three—earth, air and water; and it may be affirmed that a proper regulation of these three elements is all that is necessary in the vast proportion of farms within the temperate zone.

The earth must be alternately and thoroughly air-soaked and water-soaked; and it will ultimately be found that the one greatest use of the soil is to decompose the air, the oxygen becoming fixed by oxydisable substances, and the nitrogen absorbed by the living plants. Hence, drainage is so necessary even in dry land, not by promoting the discharge of water *per se*, but by promoting the admission of air, which must rush in and fill the soil that the water is leaving immediately, and with the same velocity, and in the same volume.

But granting these premises, it may be truly alleged that soils vary through a wide range as to their greater or less affinity for oxygen, some being highly oxydisable, others, as the purely silicious, having scarcely any appreciable attraction for it. Hence the necessity for all kinds of manures, which act not in the way that they are generally supposed, viz: in supplying food to the plants by direct appropriation of the matter of the manure, but chiefly by adding those oxydisable substances to the soil which will promote the decomposition of the air, the quantitative analysis of the vegetable constituents of any crop proving, beyond all doubt, that the manure could not have yielded more than a minute fractional part, even if it had all been so assimilated.

Under this view, it is easy to understand how new lands are for a few years generally fertile, but gradually lose their oxydisable appetites, and become chemically inert, unless they are rendered active by artificial addition of some compost.

Nevertheless, where one field is really inert chemically, a thousand are only apparently so, the soil not having been sufficiently ærated, either from the density or tenacity of the sub-soil, or defective drainage, an alteration in these conditions immediately restoring fertility.

If the question were put to any mind conversant with such subjects, what action would air and water exercise upon a lump of flint? the answer for all practical purposes would be *nil*; and as the purely silicious sands are merely an aggregation of minute flint stones, the inference is obvious. Therefore, it is easy to conceive how fortuitously one field should bear a dozen crops of wheat successively, without any manure or compost of any kind, and another, of different chemical constituents, should require the constant addition of some extraneous matter, either by stock or otherwise.

Yet, these latter instances are decidedly the exceptional ones, the great majority of our lands suffering from the occlusion of elementary influences, and really possessing all the properties essential to fertility, if they were favorably arranged for the free percolation of air and water.

It is really surprising how extensive is the impression that water is like some deleterious substance or poison to land; and therefore the chief and sole idea of hundreds of farmers is to get rid of it at any price, not reflecting that as is the egress of water, so is the ingress of air, the exchange being effected *pari passu;* and it seems probable that the final purpose of the shower is not merely to afford the essential drink to the living plant, but to displace the stagnant air in the soil, and renew it by percolation.

Nearly every field is differently situated naturally with reference to drainage, the different angles of surface inclination, the nature of sub-soil, and the character of underlying rocks, whether open or close, or having favorable or unfavorable stratification. Happy and fortunate is the farmer who has all these things favorable, and on whose farm the heaviest thunder shower passes through from the surface downwards, like a sieve. If the chemical nature of his soil will bear continuously such active chemistry as must result under these circumstances, he may enlarge his barns, or send his sons to college.

Gulf Stream as a Fertilizing Agent.

If we follow the Gulf Stream across the ocean, we perceive how fully it fulfils the purpose for which it was designed. Sir Walter Scott tells that the pools in the Orkneys are never frozen, the effects of the grand hot water warming apparatus of a far distant shore being sensibly felt even in these islands, which are situated in latitude nearly ten degrees further north than the ice-bound coast of Labrador. We all know that in Great Britain there is an extraordinary difference between the eastern and western coasts, so great indeed as to induce completely different systems of agriculture. The Emerald Isle owes her splendid grazing land to the soft west breeze, born of the Gulf Stream, which strikes full upon her shores; the western shores of England are robed in bright green pastures nourished with the warmth and moisture issuing from the same tropical source. The dairy produce of Great Britain has its root and issue in this steadfast hot water river in the ocean, the limits of which modern science has so accurately mapped; nay, the florid, plump looks of our people, and the large size of our domestic animals, are but effects of that moist and genial atmosphere which finds its birthplace in the beneficent Gulf Stream.—*London "Once a Week."*

Butter for Market.

On former occasions, we have spoken particularly of the principles involved in the making and preservation of butter. As the season is at hand when this important business is about to be resumed by regular dairymen, some may be benefitted by the following suggestions in regard to the requisites for good butter, taken from the Circular of Benton & Caverly, extensive dealers in this city, and in connection with G. C. Bogue, at Canton, N. Y. In regard to washing butter, it will be noticed it is said—"the great point is to expel the butter-milk without over-working the butter," and that some good butter-makers do not wash it at all, except in "very hot weather." Is it, then, expedient to wash butter if the butter-milk can be properly expelled without? In "very hot weather" this may be difficult, but it is evident that the "good butter-makers" alluded to are under no necessity of using water at any other time. If working is resorted to, soft water is, unquestionably, important:

1st. Cows of good milking qualities, (that is such as give good milk.)

2d. Food—Keep the pasture free from rank and strongly flavored weeds. Pasture should be of hilly or rolling lands, with good clear, running water. Pungent roots and vegetables, such as turnips and cabbages, are apt to injure the flavor of the butter and injure its keeping qualities. Pumpkins and carrots are the best vegetable food when the season of grass is over, and give a fine color to the butter. But ground feed, such as the bran of wheat, rye, ground oats, or buckwheat, is believed to be best in winter, as it keeps the cows in thriving condition, without too much increasing their fat, and makes the best-keeping and best-flavored butter.

3d. Keep the cows quiet, particularly during warm weather. The milk given by cows when in the periodical fever, or when heated from any cause, will not make the best-flavored or best-keeping butter, and should be rejected for such use.

4th. Keep the atmosphere of the milk-room perfectly fresh and pure—free from all vegetables of every kind, and at as even a temperature as possible. It should not be warmer than 65 deg. Open the windows at night and close them in the morning, during warm weather. As soon as the milk coagulates, or just before this change occurs, it is ready to be churned or skimmed. Some of the best butter-makers churn the milk with the cream; others skim and churn only the cream. When skimmed, the cream may be kept in the cream-jar 12 to 24 hours, occasionally stirred, but never covered. Tin pans are commonly used for setting milk, but tin pails, holding 12 quarts, are used by very many good butter-makers. The Scotch butter-makers of St. Lawrence county prefer earthen as a general thing.

5th. The contents of the churn should be at the temperature of 64 deg. Neither hot or cold water should be turned into the churn to regulate the temperature. Setting the churn in hot or cold water is a better way. Hot water turned into the churn injures the color and grain of the butter. Soft water is indispensable for washing butter to the best advantage. If you cannot otherwise get soft water, save rain water and cool it with ice. The water from ice is always soft. When thus washed it is ready for salting. When the conditions are right, the butter will "come" in 20 or 30 minutes. When done, the butter should be taken from the churn and put into smaller vessels partly filled with water at 40 to 45 deg., and the butter-milk forced out with a small dash or ladle. Then put in trays and wash until the water used ceases to be the least discolored with butter-milk. The great point to be attained in washing or working butter, is to expel all the butter-milk, without over-working the butter, which spoils the grain, and renders it sticky or greasy. After the butter has stood in trays about 24 hours, and been worked lightly three or four times, it is ready for packing. Some good butter-makers do not work so many times—some good butter-makers never wash their butter at all, only in very hot weather. After the firkin or tub is filled, the butter should be covered with a thin piece of muslin and the whole covered with salt and kept moist. Over-salting is one of the most common faults of butter-making. Coarse-salted, or over-salted butter, so that it will grate in the teeth, must be sold from 3 to 6 cents per pound lower in market. About the best rule for salting butter, is for every one to salt to suit their taste.

The tubs or kegs should be filled with a hot brine made of clean water and clean salt, and soak at least 24 hours before any butter is packed in them. The butter should be packed solid. A hard-wood pestle or mall of 3 or 4 lbs. weight, is a good thing to pack it down. White-oak; or the heart of white-ash firkins, holding about 100 lbs., are most largely used, and decidedly best where the butter is to be kept a long time. Other kinds of wood impart injurious flavors to the butter.

Perfumes.

The French prepare more perfumes than any other people. In the South of France and in Piedmont, vast crops of flowers are grown. Cannes and Nice furnish yearly about 13,600 lbs. of violet blossoms. Both cities are famous also for their orange blossoms, the latter producing 100,000 lbs. and the former double that quantity and of a finer odor. Cannes abounds, too, in Acacia *Farnesiana*, and affords yearly 9,000 lbs. of fine scented blooms. Careful treatment is required to extract the ethereal oils. These are so largely mingled with other vegetable juices, that 600 lbs. of rose leaves yield only about an ounce of otto of roses. The orange blossom, however, is richer, and 500 lbs. of flowers yield about 2 lbs. of Neroly oil. One perfume manufactory at Cannes requires yearly about 140,000 lbs. of orange blossoms, and 20,000 lbs. of acacia blossoms, 140,000 lbs. of rose leaves, 32,000 lbs. of jessamine blossoms, 20,000 lbs. of violets, and 8,000 lbs. of tuberoses, besides many other fragrant materials.

CRANBERRIES.—The *Boston Post* says the cranberry fever still rages at Cape Cod, and the people there have entered into their spring work of cranberry planting. Nearly every piece of marsh, swamp, or upland, which can be made available for its culture, have been secured by capitalists, and are now being speedily transformed into rich and valuable cranberry meadows.

The American Farmer.

Baltimore, May 1, 1860.

TERMS OF THE AMERICAN FARMER.

Per Annum, $1 in advance—6 copies for $5—13 copies for $10—30 copies for $20.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, $1—1 square per annum, $10—larger advertisements in proportion—for a page, $100 per annum; a single insertion, $15, and $12.50 for each subsequent insertion, not exceeding five—payable quarterly in advance.

WORTHINGTON & LEWIS,
Publishers of the "American Farmer,"
CARROLL HALL, S. E. Corner Baltimore and Calvert streets, Baltimore.

The Maryland Agricultural College.

At a meeting of the Board of Trustees of the Agricultural College, held on the 13th of the past month at the office of the *American Farmer*, the Rev. J. W. SCOTT, D. D., was unanimously elected President of the College. Dr. Scott has been for a number of years President of Washington College, Pa., and to other high attainments and qualifications for this important position, adds that of a large experience in the government of such an institution. Other action was had by the Board which we have reason to believe will ensure a full and efficient corps of instructors in the College at an early period.

The members of the Board present at this meeting were: Messrs. Calvert, President; Charles Carroll, John C. Brune, A. B. Davis, James T. Earle, John Merryman, G. M. Eldridge, Otho Williams, W. W. Corcoran, J. Dixon Roman and N. B. Worthington.

☞We have been obligingly furnished by a number of our friends, in reply to a request made last month, with copies of our January number, our supply of which had run out. One copy was sent to us from the far-off hills of New Hampshire, with a kind note of appreciation. We thank them for their friendly attention to our request.

☞Mr. Merryman, President of the Agricultural Society, through the Daily Exchange, announces that the Society has been offered the use of twenty-five acres of ground, at Canton, for five years, for the purpose of holding its exhibitions, and appeals to the citizens of Baltimore to raise the sum of six thousand dollars for the purpose of fitting up the grounds. We hope this appeal will not be in vain. The citizens of Baltimore and the Corporation should take the matter up as one that concerns their interest and their credit, and not only fit up the grounds but ensure the Society against loss. If the matter were entered into in a liberal spirit with a determination to succeed we have no doubt of an exhibition which will pay all expenses.

Reapers and Mowers.

Our advertising pages show the reapers and mowers in great strength. It is hardly necessary to ask our readers who may have any idea of purchasing, to read them all carefully, as every advertiser brings out distinctly the points of excellence which he claims for his machine; the careful comparison of them affords a useful study to such as have even the remote interest of a future purchase. There is no farm implement which commends itself more strongly by the perfection to which it has been brought, the ease with which it is worked, and the great economy of labour at a most important period in the work of the season.

Of course we will not do injustice to our advertisers, who seek a hearing of the agricultural community through our columns, by making comparisons which might be advantageous to some, to the disparagement of others. And we are very glad to be able to say that there is not, perhaps, one of these machines, for which the farmer would not gladly pay the price, if he had not the opportunity of purchasing one of the others.

It is a remarkable fact that the present advertisement of the McCormick Reaper—so widely and favorably known not only in this but other countries—is the first at least for many years, which has presented its claims conspicuously to the farmers of Maryland and Virginia. Mr. Higgins, an enterprising machinist of Montgomery county, having taken the agency, understands that it is necessary not only to have a good thing, but to let the people who want, know that you have it. And so we present to our readers, McCormick and Hussey, Ray and Stetson, Kirby and the Buckeye, Manny and Dorsey, and Hubbard, hoping that the difficulty of deciding between them, may not prevent them from deciding at all.

☞We call attention to the sale of Stock advertised by the veteran agriculturist, James Gowen, Esq., of Mt. Airy, near Germantown. This is Mr. G.'s valedictory sale of fine stock, which being concluded, he will leave the field with many laurels he has earned as a land improver and stock grower.

State Agricultural Society.

The communication signed "Exact" touches a point with reference to the State Agricultural Society, which we should prefer to evade, if it were not our purpose to deal in entire candour in the matter. Our purpose is to draw the attention of the Farmers of the State to the Society, in the hope of making it a more efficient agent in behalf of agricultural improvement. In doing so, we have no apology to offer to any one.

It is too true not only that there are no printed proceedings of the action of the Society, except as they may be had by hunting up and down in the volumes of the American Farmer, but worse than this, there is no other record printed or written, of its transactions and proceedings. It enjoys, by courtesy, the use of a set of the American Farmer, by which at great inconvenience, its former proceedings may be referred to, but owns not a book of record of any description whatever.

As to a volume of transactions, we fear there is something of sarcasm in the suggestion of our correspondent, that the operations of the Society, for the present year, be printed "in book form" at the close of the year. What is the use of a man's talking, when he has nothing to say? What is the use of publishing a book when there is nothing to put into the book? It is for this purpose, we suggested last month, that five hundred dollars be offered in premiums for valuable practical essays and reports, and that the Farmers of the State be induced to come together, for the purpose of careful premeditated discussion of questions affecting their pursuit. That the intelligent, enlightened Agricultural *mind* of the State might express itself through the Society, and so the Society might have something to say. That it might gather here a fund of thought and knowledge and experience in all agricultural matters and dispense them to its members in a substantial volume. We mean such sound practical knowledge of Maryland agriculture in its several branches, as hundreds of our Farmers have, and which they may thus impart to thousands who stand in need of it.

Such volumes are made up constantly by other State Societies, and cheerfully published at the expense of the State, as no doubt they would be here. It is with mortification and shame that we accept, year by year, the courtesy of a copy of transactions from a dozen societies, with no power to return the compliment.

We have before us now, the last volume of the transactions of *The Highland and Agricultural Society of Scotland*, one of the oldest and most celebrated societies in existence. It publishes a volume quarterly, made up chiefly of elaborate essays or reports. These essays are brought out by premiums offered from year to year, by the Society, and in its schedule for the present year, we find more than fifty premiums of from ten to thirty sovereigns, with gold and silver medals, offered. The Society states distinctly the several subjects to be treated of, a few of which we will enumerate.

1. "For an approved report on the Agriculture of Berwickshire and Roxburgshire."

"The report should embrace full details of the different system of farm management observed in this district, and of the progress which agriculture has made within the last twenty-five years."

2. For an approved report on the comparative results obtained by the following modes of ploughing: 1st, with a furrow not less than six inches. 2d, with a furrow not less than ten inches. 3d, by sub-soiling.

3. For an approved report of experiments conducted with a view of determining the comparative value of other substances, mixed or unmixed, as a substitute for guano.

4. For an approved report of the result of experiments for ascertaining the comparative value of farm-yard manure, obtained from cattle, fed upon different varieties of food, by the applications of such manures to crops.

5. Manure made with and without cover.

6. Top-dressing for pasture.

7. Autumn manuring.

8. Report on the comparative advantage of sowing down to grass with or without a grain crop.

We mention these as a few only of the large number of topics suggested by the Society, and on which the best information is thus sought and obtained. These premiums year after year, produce moreover the excellent effect of tempting practical men to the valuable habit of systematic thinking, and of setting down their thoughts for the benefit of others.

☞The communication signed a "Victim," is from a gentleman well known to us for his intelligence in the government of his own affairs and the public spirit which characterises him as an agriculturist. His statement is only a repetition of abuses of which the countryman has more or less reason to complain, at the door of every market, whether of cattle or corn, potatoes or cabbages. So long as it is necessary to send country produce to this or any other large market, his protection from such abuses must depend upon the efficiency of the Agency he employs to attend to his interest. Unfortunately, producers

of all classes are not, as a general thing, satisfied, that those who in theory represent their interests here, do so in fact, or at least with the energy and efficiency requisite for their protection.—What the reason is, it is difficult to determine. The amount of commissions paid by the whole producing community is in the aggregate very large. For grain alone some $80,000; for tobacco more than $50,000; for beeves about as much more. These alone, to say nothing of fruits, vegetables, commissions for purchasing, &c. constitute a "money power," which if systematised and properly directed, would command a service *exclusively* and *entirely* devoted to a watchful guardianship of agricultural interests, by trained and competent business men. This is what is wanted more than legal restrictions or legislative enactments.

☞ The following from a highly esteemed gentleman, for many years Editor of a Southern Agricultural Journal, was received some months since, and we had intended to notice before his suggestion. We have cheerfully put ourselves right on the record so far as he is concerned and shall be happy to enlarge our list of honorary members farther, as there may be occasion. We commend the hint of our friend to the consideration of the Agricultural press:

February 12th, 1860.

To the Editor of the American Farmer:

DEAR SIR: Having received the 2nd number of my old favorite, the American Farmer, I think it time to forward my subscription for the same.

I find it is not customary to make an old Brother Country Editor, an honorary member, and to furnish him with a *free* paper by all those with whom he has exchanged. At least I have not had that honor conferred on me but by one paper, and presume therefore I have no right to claim the favor. I am *out* now and never expect to become an Editor again, but I *do* think it is a matter worthy of the consideration of all present Editors.

With my best wishes, &c.

☞ Mr. Isaac Pullen, of the Hightstown Nurseries, N. J., has forwarded two bundles of trees which he asks us to present to the Agricultural College in his name. We take pleasure in executing his commission and offer our services to others who may be inclined to emulate Mr. Pullen's liberality.

☞ MR. WM. C. LIPSCOMB, Jr., of Washington, D. C., is our Travelling Agent for Maryland and Virginia.

Lime, Guano, &c.

The following inquiries from an esteemed correspondent were accidentally passed over last month:

1. What is your opinion as it regards the relative value of stone lime and oyster-shell lime, (as prepared in the city of Baltimore,) each to be applied to red clay subsoil lands, with a surface of medium stiffness and ordinary capacity?

2. The *quantity* to be applied per acre?

3. The *time* most suitable?

4. The effect Peruvian Guano would have upon wheat, sown the fall immediately subsequent to liming the *spring* previously with *shell* lime?

5. Does or not, in your opinion, an *honest* combination of ammoniacal and phosphatic guanoes (say half Peruvian and half Mexican, mixed by the farmer himself,) act better, under *all* circumstances, on such lands as described above, than the Peruvian alone?

6. With regard to Timber—will or not white oak posts last longer in the ground by having been previously scorched at the butt; I mean where you are compelled to plant them green or unseasoned?

7. Would it repay the trouble to *bark* them either in a green or seasoned state? C. J. L.

In answer to the first query, we should think it not material whether stone or shell lime be used. Weight for weight we should perhaps give the shell lime the preference.

To the 2d query we say, twenty-five to thirty bushels per acre of slaked lime is the most economical application—repeating it at every rotation until it reaches a hundred bushels.

To the 3d. It may be put on at any time; but on the young clover or grass after harvest, in summer, fall or winter. It should go upon grass land always, to lie on the surface as long as may be, before the sod is broken.

To the 5th. The action of Peruvian Guano will not be influenced by the use of lime the spring previous, except, perhaps, to make it more effective. The lime will be sufficiently carbonated by fall to prevent its driving off the ammonia too rapidly.

In reply to the 5th, we say yes. Theory indicates, and experience seems to have confirmed this opinion. Yet it may not be without many exceptions.

To the 6th and 7th. Posts, whether green or dry, will undoubtedly last longer for being scorched before planting, and the bark should in all cases be taken off.

Confession of a Country Gentleman.

We wrote recently to a gentleman expressing our apprehension that a letter from him, containing a remittance for seeds, &c., we had purchased for him, had miscarried. He answers us promptly that he had prudently shunned such a disaster by not remitting the money, and gives the following account of what he calls the "lex loci" of his county, we would only remark that we think he is mistaken as to the local character of the law he mentions.

"We have a custom here in ——— county, of dealing on "tick," and consulting our own pleasure about the payment, a great many preferring not to pay at all; which latter method of getting clear of liabilities has one great quality to recommend it, that of convenience. It may not square well with the doctrines of morality as preached by our divines, but it certainly has the advantage of considerable antiquity, and I have always heard and read that custom makes law all the world over. Taking it for granted that you were totally ignorant of our public local law, which forbids the presentation of an open account until after the lapse of two years and eleven months, I shall not construe your act in sending me mine of less than three months standing, into a desire to insult or maltreat me, and will be fully satisfied with an apology for having unwittingly transgressed our "lex loci."

As our friend was so considerate as to send a check in this letter, we could do nothing less, of course, than offer him an ample apology for our mistake. May we not however presume, not at all on our own account, (far be it from us,) but in behalf of the agricultural progress we advocate, to present a few words of argument against this law. Our friend's pleasant response tells a very serious fact. It is hardly possible that the Legislature could enact a law which would weigh so heavily on the agricultural community as this "law of custom" which they impose upon themselves, of paying at some indefinite time, when it may be perfectly convenient to do so. It effects the price of every article of necessity or convenience, or comfort, they enjoy in their families, or may have occasion for in the cultivation of their estates. And it operates like a law upon *all*. It taxes the exact and punctual business man, as well as those who are otherwise. It is no compensation to him to get a remittance of 5 per cent. for cash, when not less than 20 per cent. has been put upon the price as a guard against this evil law of custom, which accepts six months credit with the understanding that it may be half that many years.

And so it is as regards facilities in commanding the use of money for the purposes of improvement. The general law of want of punctuality, discredits among moneyed men and moneyed institutions, the most punctual business man outside of city limits, and the most permanent and safe security, that of a well cultivated farm. We complain of this and think ourselves badly treated, but the fault is with ourselves. The answer we received from a Bank Director, who though a business man, is moreover a true countryman himself, is directly to the point. "I'll tell you the reason the banks won't discount country paper; it is because country people have such an inf—r—l way of *putting off*."

☞ Our lady correspondent in N. Carolina, who has given us the several very acceptable contributions from "Home comforts," writes us that her design to send others, is hindered by "my children and my plants." A good excuse truly. If the "strong minded" who occupy Northern platforms were *thus*-minded, how much better for themselves and how much better for "the plants and the children."

We still hope however that so good a friend of "the old Farmer" may occasionally find time, between duties which we acknowledge to be paramount, to favour us with occasional notes of practice of which she is manifestly very capable.

Johnson Island Guano.—This is one of the new Guanoes, recently imported from the Pacific Ocean. It is represented as rich in Bone Phosphate of Lime, and having from 1 to 2 per cent. of Ammonia. As the supply of good Phosphatic Guanoes from old sources fall off, we are glad to find that new and promising ones are taking their place. This Guano is advertised by J. Malcolm & Co.

☞ It is proper to state that since the remarks on Reapers and Mowers were put in type, we have received the advertisement of Messrs. Spear & Forney, agents in Baltimore, for the McCormick Reaper. Our Virginia friends who deal at Alexandria, will also please observe that Messrs. Addison, Wallace & Co., are the agents at that place. By the advertisement of Mr. Thomas Norris, of this city, it will be seen that the Manny Reaper, of which he is the agent here, is supplied with a self-raking attachment. Mr. Fitzhugh, the agent at Frederick, supplies those sold by himself with a self-raker of his own invention of which we have spoken heretofore.

☞ We have received from Saxton, Barker & Co., Agricultural Publishers, N. York, through James S. Waters, Esq., of this city, the following new publications:

The Comprehensive Farm Record, with Directions for its use. Arranged by Franklin B. Hough, Superintendent of the N. York State Census for 1855, &c. To the farmer desiring, as every one should, to keep a record of his farm operations, and careful accounts of his expenditures, his profits and losses, this work offers great facilities. It is arranged to last for 25 years and its comprehensive plan, faithfully carried out, would afford a most interesting and valuable history of the farm. We commend it especially to the young farmer. He can form no habit more useful to himself than that of keeping such a record, to say nothing of the interest of the record itself through a series of years.

The Patient's and Physician's Aid. By Dr. E. M. Hunt. How to preserve health; what to do in sudden attacks until the doctor comes; and how best to profit by his directions when given.

Single Stem, Dwarf and Renewal System of Grape Culture, adapted to the Vineyard, the Grapery, and the fruiting of vines in pots, on trellises, arbors, &c. By William Bright, Logan Nursery, Philadelphia. This is a new and, we think, will prove a valuable little treatise on the very interesting subject of *Grape Culture.* The author thinks the *new system* which he sets forth and advocates will be found, in practice, simple, economical, and exceedingly efficient in the production of large crops of perfect grapes.

Our Farm of Four Acres and the Money we made by it.—This is an American reprint from the twelfth London edition, showing the experiences of two city ladies on a farm of four acres. It is a pleasant, well written, sensible little book, with excellent practical hints and instructions, which even ladies experienced in country life *may find useful.*

The Orchard House, or Culture of Fruit Trees in Pots, under Glass. By Thomas Rivers, Sawbridgeworth, England—with an Appendix, containing additional directions *For Growing Trees and Vines in Orchard Houses*—by Wm. Saunders, Landscape Gardener, Germantown, Pa.

THE AMERICAN PUMP.—We call the attention of our readers interested in the use of pumps for almost any purpose, to the advertisement of the American Pump, by Mr. James M. Edney. We understand it is very highly spoken of by those who have tried it in various sections, for its power of forcing water by hand, both perpendicularly and horizontally.

Maryland Agricultural Society.

To the Editor of the American Farmer:

In the last two issues of your journal, I notice editorial comments on the past action, and suggestions for the future guidance of the Maryland State Agricultural Society—permit me to suggest a thought concerning a matter, not touched on in your articles, it is that there are not to be found printed proceedings of the Society's operations since its organization, excepting the record published in the "American Farmer."

Whilst I have at my command the printed reports, in book form, of the State Societies of New York, Pennsylvania, Massachusetts, Ohio, Michigan, Iowa, (and there may be other States,) and even of some County Societies, I am compelled when wishing to examine anything connected with the past transactions of the Society of my own State, to search through the pages of your journal, to obtain the desired information. Cannot this be remedied, and cannot at the end of the present year, a full, careful, and complete printed report, in book form, of the Society's operations, be furnished to members and others interested? EXACT.

German Millet.

N. B. Worthington, Esq.

DEAR SIR: I see in one of the best Northern agricultural journals, the *German Millet* most highly spoken of. I should like to know from some experienced farmer the success it has met with in this climate, with regard to its *productiveness.* Will some of your subscribers be kind enough to let me know through the columns of your paper? Any information with regard to it will oblige yours, respectfully,

JOHN R. GRAY.

The German Millet resembles very much what is now more favorably known as Hungarian Grass. It makes a very heavy crop of good hay in ninety days from time of sowing, on rich or highly manured loam. We should sow the Hungarian Grass in preference.—ED.

☞ We are indebted to B. P. Johnson, Esq., Secretary of New York State Agricultural Society, for a copy of the address of Abraham B. Conger, Esq., President of that Society, at its annual meeting, Feb'y 9th, 1860. We will make free to say to our worthy friend, the Secretary, that the volume of Transactions of his Society, for the past year, which we always look for with much interest, has not come to hand.

The profits of Soil Cultivation.

The following suggestions from an article in the *United States Journal*, are worthy of note. The cultivation of the soil is by no means so profitable as it might be made, and one great reason of it is, that we spread over too much surface. We must learn to concentrate more our available forces and means. If we cannot or will not sell a portion of our lands, let us at least devote more of them to grazing stock, and confine our labour and manures to a smaller surface. At the same time, without being in too great hurry to adopt new notions, we must keep our eyes open to improvements and adopt as prudence may allow, such new crops as will give a greater acreable product. As soil cultivation is the safest business we can follow, it only wants a little more show of immediate profit to make it the most attractive.

The grand change the cultivators of the soil in our country have to make, and one that involves almost all the changes that are so desirable, is that from the superficial cultivation of large farms, to the complete and thorough working of small ones. We must cease to scatter and weaken our labor over large areas of poorly or moderately productive land. We must work only rich soils or those we can make rich. In one word, we must *concentrate*—CONCENTRATE.

The following item, from an exchange, is right to the purpose:

"In a lecture on sewage, delivered at the Farmer's club, Mr. Alderman Mechi referring to his Tiptreehall estate, said: For the last six years, my gain as landlord and tenant on my little farm of 170 acres has been nearly £700 per annum. Even this year, with wheat at 42s. per quarter, I have gained £600, after paying every expense. Of course, much of this gain has arisen from steam power, drainage, deep cultivation, and other improvements; but the liquified manure system has greatly contributed to this result."

Mr. Mechi's *little farm* of 170 acres is really little, because he has working force enough to till it like a garden; and along side of it, tracts of 30 to 50 acres for single handed farmers here, would compare very properly.

Along with the other improvements here named, "liquified manure system" is a trifling affair of conducting all possible matters of excrement and of fertilizing power, otherwise wasted, and even of introducing worthless carcases of animals, into large underground tanks, where they are allowed to decompose thoroughly without escape of the products, and then pumping this strongly charged liquid by steam, and through a system of pipes previously laid, delivering it wherever needed over the cultivated land.

The careless and unaccountable waste among our farmers, of articles capable of serving as manures should be brought at once to an end. Clover and other green crops can most profitably be put upon, and turned under, large areas of our soils. Muck should be composted; and so fast as they proved themselves adapted, artificial fertilizers should be liberally applied. To insist that the farm shall wholly manure itself, is poor philosophy and worse economy. The rule should be, find out how much of fertilizing substances, from without, can be used to profit, and buy accordingly.

Another important point, though not properly appreciated, is this. The farmer should, as a rule, cease raising all crops that do not render a large return to the acre. If a certain crop, though not the best, can be raised at a great saving over purchasing it for one's own use, or if it be well nigh indispensable in a system of rotation, let it so far be kept up. But wherever *wheat*, or *corn*, or *hay*, or what not, is generally a poor crop, let it be at once abandoned, until the price of that article so rises, or the land is so improved, as to make it once more a really paying crop.

How is it possible for Virginia farmers to grow rich by raising wheat at an average of no more than eight bushels per acre? With such crops they cannot afford to keep up the fertility of the soil; and the result is poverty of both the land and the cultivator.

How easy, on the other hand, for the onion raisers of Danvers and Weathersfield, with a yield of 500 bushels per acre, to keep up the fertility of their lands! They do this, and make money besides. All farmers cannot, of course, sell onions at a profit, if all should turn to raising them; but the demand is yet ample and the price good. What we do contend is that in every part of our country some crops and methods of culture can be hit upon, that will enable the cultivator of the soil to receive a liberal reward for labor and capital employed. And, generally, this result will be better attained by a tendency from broad to restricted tillage, and from indiscriminate selection of crops to the few and best. We want the *farm* to approach in management to the *market garden*.

We will endeavor to point out some of the ways in which, by taking advantage of the circumstances of the times, soil culture can be rendered highly profitable. At the present time, there is an increased and increasing demand for fruit of all kinds, at large, and in many cases, advancing prices.

An acre of vineyard from the age of three years, ought to yield five thousand pounds of grapes, yearly; which at ten cents per pound, would bring five hundred dollars.

An acre of strawberry vines, two years old, would produce at a low estimate six thousand quarts; which at ten cents per quart, would amount to six hundred dollars.*

Lawton blackberries may easily be made to yield three thousand quarts an acre; and they are eagerly sought for at twenty-five cents a quart in this city; but at only twenty cents a quart, this would bring six hundred dollars.

One hundred pear trees would not be crowded, if set on one acre, and three bushels per tree would not be a large crop, while two dollars is far below present prices for good pears; yet at these low estimates, we have six hundred dollars a year, per acre.

*These acreable estimates are very extravagant, we think, yet at one-half the amounts named, they make the argument good in favor of the increased culture of such crops.—*Ed. Amer. Farmer.*

Fifty apple trees could stand on an acre, and be nearly thirty feet apart, five bushels per tree is not a large crop, nor eighty cents a bushel a high price for fine fruit; but two hundred dollars an acre is a fine income when we consider how little it costs yearly to obtain it.

It will be noticed that the above estimates are not high, if the best of care and culture are bestowed. Indeed, under favorable circumstances, more than four times the above amounts have been realized. Yet, losses by destructive insects, blight, and so on, must sometimes be expected, as with almost every crop the farmer may attempt.

But it is not necessary that farmers should grow fruit, to make the cultivation of the soil profitable. In many sections of the Union, the wheat crop can be doubled, and so rendered highly profitable, by thorough underdraining. Mr. John Johnston, near Geneva, N. Y., finds that on his soil underdraining will pay in increased crops, in from one to two years, the whole cost of tile and labor of putting down, and afterward realize a handsome net profit.

Over very large sections, our lands can be rendered very productive and profitable by the use of muck, sea weed, marsh mud, and bony fish. Others can be renovated by guano, the prepared phosphates, or plaster and clover; and still others, by soiling cattle, and selling the meat and milk.

Live Stock.

The opinion that keeping a large stock, and enclosing to improve land by excluding stock are rival and incompatible systems, has prevailed, now prevails, and we fear will continue to prevail to the great injury and detriment of both, in this and other agricultural communities. This error not only combats but retards the system upon which the regeneration and improvement of our land mainly depends. It will be admitted by every farmer and planter of intelligence, that keeping a stock sufficiently large to consume all the grass, hay, &c., produced by the arable and meadow grounds of the farm, and not the enclosing system for the improvement of the farm and the consequent support of the stock, has prevailed in this and other Southern States, particularly Virginia, to the injury and loss of all who have tried it. In Eastern Virginia, and in some parts of this State, the consequences of keeping a stock, the support of which renders it necessary to graze the arable lands, besides feeding away a portion of the food made, render it impossible to raise a sufficiency of working team for use. This destruction of the fertility of land by grazing without deriving any adequate profit from it, now makes it necessary to apply a portion of the agricultural profits, scanty as they are, to supply the deficiency of a still more wretched system of cultivating and grazing. The old fogy system of cultivating and grazing lands has resulted in their exhaustion and sterility.

Let young America then teach the lesson, that by cropping and grazing them less, manuring and enclosing, more bread and meat can be raised. Away with your nonsense, says the old fogy, this is all book, scientific farming, I'll have none of it. Let him die in the poor house. Rich land is as necessary to raise stock as for making bread —it follows, therefore, that a system of grazing which impoverishes land, will as soon reduce the size of the stock, as a system of culture having the same effect will the quantity of the crops. But the old fogy says, young America recommends the system of enclosing to recover the fertility of our land, and this foolishness will reduce our stock. Charge this to his ignorance, his determination to do as his daddy did before him, regardless of consequences. Stock require rich land as much so as breadstuffs—without it we can have neither, unless we depopulate the country to provide food for stock. We have never found a good system of grazing co-existing with the miserable system of agriculture; some entertain the opinion that both systems cannot prevail at the same time, that one must be sacrificed for the other. This is a great mistake. We hold that a good system of one involves a good system of the other; in other words, profitable farming depends, in a great measure, upon a good stock, and a good stock cannot be raised and supported without a good culture, so there is a total dependence of one upon the other. Arable lands should never be grazed; meadows and standing pastures should be prepared and kept for grazing. When both of these systems are incompatible—that is, when both cannot be pursued advantageously, owing to the character and quality of the soil and the location of the farm, the question, *which* shall be adopted and the other abandoned, naturally presents itself, and the good sense of the farmer must determine. A dry, light sandy soil is not valuable for grazing purposes; on the other hand a cold, moist, wet clay soil suits grazing better than culture. These natural disadvantages arising from the location of the farm and the character of the soil, unfavorable to the one or other system, are not so insurmountable as to exclude either entirely. The farmer owning the light, dry, sandy and poor soil, must adopt the enclosing and manuring system for fertilizing his land, and thereby enable him to raise crops. The offal of wheat will support a small stock; and the farmer owning the cold, moist, wet and stiff clay soil, must first drain his land, then enclose and manure it to make breadstuffs for the family.

As a farm under the enclosing, manuring system increases in fertility and production, so it is enabled to increase its stock, and the surplus crop appropriated to this purpose may be more valuable than the same farm could be under the grazing system exclusively. This increased fertility enables the farmer to reduce the quantity of his arable land, and appropriate more to grazing purposes, a very different mode of providing for stock from that of grazing poor land. The least scintilla of intellect will decide the question here discussed: whether the farmer, under all the circumstances enumerated, had better cultivate and graze, or follow the one or the other exclusively.

Climate as well as the location of the farm and the character of its soil, has much to do with this business. In western North Carolina, the raising of stock and the cultivation of culmiferous crops will pay better than a more general system of farming, including the whole family of succulent and leguminous crops.—*N. Carolina Planter.*

Experiments with Manures.

For a long time there has been a difference of opinion in regard to the manner in which manures should be applied to the soil. We refer more particularly to the application of manures to what are called tillage crops—it being generally conceded that grass-land may in some cases be advantageously manured on the surface. But in any given case, and for almost any crop, except grass, there will scarcely be an agreement of opinion as to whether ordinary stable or barn-yard manure should be buried eight inches, four inches, or simply mixed slightly with the soil by the harrow. It may be said that the character of the soil, the kind of crop, and the condition of the manure should govern the mode of application. Undoubtedly it should, to a great degree; but the object is to settle a special case, in the first place, and then dispose of others by a similar test.

Of late, the idea that manure should be left entirely on the surface of the ground, has been a prominent topic in agricultural journals. It appears in striking contrast to the deep-burial notion, which has been urged under the plea that the virtue of manure was sure to rise, whatever the depth of earth which covered it. There is a point of much consequence in connection with surface manuring for cultivated crops, although it is not involved in the question as to what mode of application confers the greatest fertility. It is this: manure left on the surface, unless thoroughly decomposed and made fine, is an obstruction to cultivation by clogging the implements used for that purpose. If the manure is coarse and strawy, it constitutes no trifling obstacle with crops for which the harrow, horse-hoe or cultivator is used. It would therefore be desirable, in making an experiment, to test the advantage of the different modes of applying manure, that it should be so fine that what is left on the surface will not occasion the difficulty alluded to.

We have before mentioned that the Massachusetts Society for Promoting Agriculture, has offered liberal premiums for a course of experiments in the application of manures. The first of these is $100 in amount, the second $75, and the third $50. The conditions to be observed are comprised in the following extract from the transactions of the society for 1859:

"Select a level piece of land of any convenient size, from twenty square rods up to as many acres or more, which should be as nearly equal in its character and condition as possible. Divide it into five equal parts, numbering them 1, 2, 3, 4 and 5, for a rotation of three years.

"Divide the manure which it is proposed to apply, and which should be of a uniform character, into four equal parts. At the time of first ploughing in the spring, spread evenly one-fourth of the manure upon plot No. 1, and then plough the whole field of an equal depth. Apply another fourth part of the manure to plot No. 2, and then cross-plough the whole field to about half the depth of the first ploughing. Spread another fourth of the manure upon plot No. 3, and harrow or cultivate the whole field: after which sow or plant the whole evenly, with any crop preferred. Finally, spread the remaining quarter part of the manure upon plot No. 4.

"Observe that by pursuing this course, each of the five lots will receive equally a deep ploughing, a shallow ploughing, and a harrowing or cultivating, the only difference in them being that in No. 1 the manure is buried deep, in No. 2 shallow, in No. 3 buried only slightly, but coated with loam, and in No. 4 left exposed upon the surface; while No. 5 gets no manure. The manure is to be spread broadcast and as evenly as possible. The after cultivation should be the same on each of the lots, and the harvest of each should take place at the same time.

"Let a statement of the character of the soil, whether light or heavy, dry or moist, leachy or retentive of manures, the crop of 1859, kind and amount and mode of application of manure in 1859, size of field covered by experiment, depth of first ploughing, kind and amount of manure used in 1860, kind of crop, when and how sown, number of times and manner cultivated, and weight of product on an average rod of each plot be made in 1860, and returned in the annual report of each society.

"If there is a double product, as grain and straw, corn and stover, let the weight of the secondary product be given on each plot.

"If the competitor weigh the whole crop instead of estimating it by an average rod, there will be no objection to such a course.

"A brief synopsis of the weather for each of the following months, by dividing the month into three parts, and using the terms dry, moist, and wet, to indicate the general character of the weather, will also be expected.

FIRST THIRD.	MIDDLE THIRD.	LAST THIRD.
MAY,		
JUNE,		
JULY,		
AUGUST,		
SEPTEMBER.		

"A similar report of all the above items, except the nature of the soil, will be made in 1861, and in 1862, when the premiums will be awarded. No manure is applied to the second and third crop."

Notice of intention to compete for these premiums, must be given to the secretary, Richard S. Fay, Esq., on or before the first day of January, 1861. Competition is open throughout the State, and competition for premiums offered by societies (within the State) are invited to compete for these. In awarding the premiums, preference will be given, all other things being equal, to experiments tried on the largest extent of land, and to competitors who weigh the whole crop, instead of an average rod.—*Boston Cultivator.*

THE SUGAR SUPPLY.—At the meeting of an association recently held in Liverpool, it was stated from official returns that prior to 1834 the average export of sugar from Jamaica to England was 67,000 tons, and now it hardly reached 30,000 tons. In Cuba the exports for the same period, from Havana and Matanzas only, had increased from 82,000 to 240,000 tons; and from Brazil the exports for the same period had augmented from 63,000 to 120,000 tons. Hayti, which formerly exported a large quantity, now exports none, and imports a small quantity for its own consumption. The supply from the Mauritius and the East Indies is slowly increasing.

Cotton.

The following statement presents a condensed view of the movements of the cotton trade from Sept. 1, 1859, to Jan. 7, 1860, as compared with the same period a year ago:

Exp'd since Sept. 1—	1858 9.	1859-60.	*Inc.*	*Dec.*
To G. Britain, *bales.*	599,899	968,747	368,848	.....
France.....	277,483	254.499	.....	22,984
North of Europe.	75,089	53.615	.....	21,474
Other For. Ports.	86,184	64,543	.....	21,641
Total.....	1,038,655	1,341,404	302,749	.....
Stock on hand and on shipboard at all ports	844,550	1,009,060	164,510	.....

From these figures it results that the movements in cotton at the ports of export for the current cotton year have been in excess of 1858-9 to the extent of nearly half a million of bales. The opinion generally entertained that the crop will exceed last year's by 500,000 bales, is likely therefore to be more than realized.

It will be observed, that the exports to France, the North of Europe and other foreign ports, have respectively diminished, whilst the amount shipped to Great Britain is in excess of last year to the extent of about 60 per cent.

This fact shows an enormous increase in the consumptive capacity of Great Britain with reference to this staple; and is not without its significance in regard to the future price of cotton. That country alone has taken within the first four months of the cotton year 368,848 bales more than at the same period a year ago, which was also one of extraordinary activity. We have, therefore, sent thither already 70 per cent. of the anticipated increase of crop, whilst only about 30 per cent. of the aggregate product has been shipped. Should the shipments for British ports be sustained in this ratio, an advance in the price of cotton must inevitably result, according to the unfailing law of supply and demand. Judging from the present aspect of British manufactures and commerce, there is every prospect that this ratio of demand will be even more than maintained. The exports of cotton goods from Great Britain during the first 11 months of last year were 15 per cent. in advance of the same period of 1858. The new adjustment of affairs in the East Indies has created a much more extended demand for manufactured goods; whilst the China markets have taken a large increase of merchandise; and as the result of the prospective war, may be expected to buy even yet more largely. The commercial policy of England is evidently to establish a great market for her manufactures among the half-clad millions of the East—a project which she seems in every way likely to accomplish more fully than hitherto, and which, when realized, will vastly increase the demand for American cotton. That the spinners and weavers anticipate a large extension of the trade in cotton goods is evident from the large increase of machinery which is taking place in that district. The *Manchester Guardian* remarks:

"Machinists have all along been full of orders, partly from foreign countries, but principally from our own capitalists. New spinning and weaving establishments are in progress; too many, possibly, in the actual position of the labor market. Unoccupied spaces in existing works are also being filled with looms or spindles. But, above all, old machines, especially for spinning, are being rapidly displaced by new of the most improved construction. This is a very gratifying fact, as securing greater efficiency and the highest attainable perfection."

In the same point of view, the *Prices Current* of Geo. Fraser, Son & Co. says:

"The prices of cotton have ruled low throughout the year, compared with the high standard established for yarns and goods, leaving a very large margin for spinning and manufacturing. To all present appearances this improvement is likely to continue, and, as a natural consequence, great extensions are being made both in spindles and looms, so that although whilst the margin may continue great, the price of the raw material is not likely to be depressed, or, if so, only temporarily. Indeed, with the increasing trade of the world, it is most important that the price of cotton should be kept sufficiently high to stimulate a still considerable and constant increase year by year in its growth. The present stock would be felt to be far too small, only for the knowledge that the new American crop is larger than any previously gathered, and it is by price, and by price only, that planters in America and other parts of the world will find it to their interest to keep up an adequate supply."

These facts speak for themselves as to the tendency towards an enlarged consumption of cotton. The question is whether our planters will produce in a proportion equal to the growing demand, and so keep prices at their present level, or create an advance by inadequate crops.—*U. S. Economist.*

Disinfectant.

The Rev. Mr. Seeley, who has been preaching at Paris, France, at the American Chapel, gives to the *Springfield Republican* an account of a new "disinfecting powder" lately discovered in France by Messrs. Corne and Demeaux. It is produced from a mixture of ordinary plaster of Paris and coal tar. Its proportions are one hundred parts of plaster of Paris to three of the coal tar. The mixture must be made in a mortar or in a hand-mill, and the pounding continued until the two ingredients are thoroughly mixed. It is sold in Paris at ten cents a pound. For preventing the disagreeable odor of sinks, &c. the effect is instantaneous, and it is much cheaper than chloride of lime for this purpose. A small piece not bigger than a pin's head will render fit for use a pint and a half of water that is beginning to grow putrescent. It can be used in agriculture as a fertilizer, which will purify a heap of manure, and enrich the soil. It has been employed in hospitals as a disinfectant, and by the surgeons on putrid, bad smelling sores. It is well worth trying in this country.

THE ROOT.—The root is the most important part of the tree. If they can spread and extend themselves, the trunk and branches will follow, of course, and in due time the fruit will appear. Again, the power of a tree to resist winds depends much upon the strength and circuit of its roots. If they are fine and far spreading, but little danger will arise from stormy gales.—*Horticulturist.*

Cultivate the Basket Willow.

The cultivation of Willows has been a subject of much ridicule in this country for a few years past—but when it is known to what extent they are imported into this country, the immense quantity grown and used in the old countries, and the great variety of uses to which they can be applied, and especially since it has been proven that from *two to three hundred dollars per acre* can be realized from their cultivation—ridicule has given way to facts, and plantations are being started throughout the country. Some who have attempted to grow Willows have failed to make it profitable, but such failures are caused by a lack of knowledge as to the proper manner of cultivating and preparing them for market.

It is but a few years since anything was known of their cultivation in this country. A few men started the business on a small scale, merely as an experiment, and when they had proved that the best French Osiers would thrive in this country, and that a very large profit could be realized from their growth; they published this information, stating the great profit of their cultivation, and the advantage of growing them in this country instead of importing. Thereupon many rushed into the business—some quite extensively—without any knowledge of the different varieties of the Osier, or of their cultivation and preparation for market.

In this country, as it was once the case in England, ash and oak baskets are much in use. But the time is fast approaching when Willow baskets will drive them out of the market. In England, formerly, all light goods were packed, for transportation, in light boxes, and in mats, and so were vegetables. Now baskets are in universal use, except for goods that will be injured by getting wet. Willow packing-baskets are in use for almost every purpose of transportation, by farmers, gardeners, wholesale dealers of all kinds, and by all classes in the community, for every possible purpose.

The cultivation of Willows is not difficult nor expensive, if properly understood. The first thing necessary, is to choose a proper piece of land, which should be rich and moist, but not *wet*. Many suppose that Willows require a wet place or they will not thrive, but it is not so. If you will notice where native Willows thrive best, you will find it is not in wet places, but close on the banks of some stream where the land is always *well drained*, but never suffers from drought. Consequently, we find the best land for a Willow plantation is rich alluvial interval, that is flowed occasionally; or a mucky swamp, naturally moist, but well drained. If the land is naturally rich, it should have a liberal dressing of manure, which should be spread on and plowed under as deep as possible, then harrow and fit it as you would a garden. There is no danger of doing it too well as you have it to do but once, and it will affect the crop for years.

When the land is prepared, mark it off as you would for corn, or use a line to set by, and set the cuttings in rows 2½ feet apart, and about one foot apart in rows; stick them perpendicular and leave but one or two buds above the ground. If it is greensward, use an iron spindle to make a hole for them. On mellow land, it is no more work to set an acre of Willows than to plant an acre of potatoes, but it is very important that it be well done, as they are not set over every spring, and if badly started they will never produce a full crop.

They should be cultivated the first year, so as to prevent all grass and weeds from growing among them, and keep the ground loose, and the second year until they get up so as to shade the ground and not be injured by working among them.

Cuttings should be procured in the winter, and set as early in the spring as the ground can be prepared.—*Scientific Artisan.*

Stable Management of a Horse.

It is one thing to own a horse, but it is another thing to know how to take care of him. The *Woodstock* (N. B.) *Journal*, gives a few practical hints on this subject which are worth remembering. A stable horse needs special care and attention. His feeding must be as regular as the measurement of the hours. When a change of feed is made it must be done with great care—giving a small allowance at first until the stomach becomes used to the change. He must be cleaned every day, and when we say *cleaned*, we mean all that can be conveyed by that word. A good curry-comb, brush, and an oiled woolen cloth, are the utensils necessary. First take the curry-comb and begin at the top of the neck, back of the ears, working the hand both ways. Proceed in this way till you have gone over the entire body and legs. Then take both comb and brush, and every other stroke draw the brush across the teeth of the comb to clean it. An experienced groom will do this instantly. This done, take your cloth and lay the coat and remove the dust which adheres to the outside. The face and ears must also feel the Brush.

Few men know how to clean a horse properly. If the above directions are followed daily, your horse will enjoy good health generally. Stabled horses must be exercised daily. This is absolutely indispensible to good health. If the feet of horses are brittle and liable to break and crack, they must be well oiled once a week. A horse thus treated will always be ready to go when wanted, and you will not be ashamed either to ride or drive him.

Another thing quite as important is a clean and well ventilated stable. We cannot excuse any farmer or horse owner, who does not clean his stable twice a day. A stable should be so constructed as to have a wide passage way or floor in front to feed from. Above the manger a space should be left a foot or two in width clear, and the passage way should be the avenue for the supply of fresh air to the nostrils of the horse.

Lime.—Lime will descend down as far as the earth is pulverized; and it should, therefore, be placed on top of the ground. When land has been limed for a number of years, sub-soil plowing is as good as a new coat of lime, as it brings it up again to the surface. Eighteen per cent. of the leaves and bark of the apple tree is lime, which shows that apple-orchards consume a vast amount of this mineral, and unless it is often replaced, the orchard must suffer for the want of it.

Gail Borden's Condensed Milk Laboratory.

The responsibility of the milk-man is very great, for the health of all who drink his milk and the life even of infants depends upon the purity and excellence of the article of his traffic. The astonishing developments made within the past year or two in regard to the frauds practiced upon the public, especially in our large cities, by furnishing of diseased milk, and even this greatly "extended," to use the phrase of the day, give especial interest to the attempt to obviate these evils and many others attending even the most honest and expeditious ways of distributing pure milk daily to city customers. At the same time, to farmers this matter comes directly home, as by Mr. Borden's process, three quarters of the expense of transportation being saved, it is evident at the same cost it can be taken much further, and as it remains sweet much longer, it will also bear much longer transport in warm weather. Thus there certainly is not a farm in Connecticut the milk from which, could it be subjected to Mr. Borden's process, might not be sent daily to New York or Boston, and arrive not only perfectly fresh but in condition to keep sweet longer than milk fresh from the cow.

Burrville is a manufacturing village which has come into existence within a few years upon the Naugatuck railroad, using the power of a little babbling, rolicking stream which comes down from the mountain. The Laboratory, or "milk-factory," as it is called, is in one of the wildest gorges of the Litchfield hills, and with the conduit which brings the water to the immense overshot wheel, it clings affectionately to the narrow mountain road, which is glued to the almost precipitous side of the gorge, as if in this was its only hope of not taking the fearful plunge among the rocks and rapids below.

The long and short of the whole process is, that fresh milk is received night and morning, and condensed to one-fourth its original bulk by evaporation, and in this shape, that is, looking like very thick cream, it is sent to market, requiring only to be diluted with as much water as has been removed from it, to be as perfect and excellent milk as it was at first, and in fact, a little better, as we will explain: The cost in market is twenty-five cents per quart, or six-and-a-quarter cents for a half-pint, which by the addition of three half-pints of water will make a quart of milk decidedly better, more healthy, and less watered than the milk bought of milkmen in our cities.

To any one entering Mr. Borden's buildings, the great cleanliness, the smell of fresh milk and clean tins, the white floors and general absence of everything in the least doubtful, as if everything from the floor-boards to the ceiling challenged inspection—is quite overpowering. The process which the milk goes through is in brief as follows:

When each dairyman brings his milk a sample is taken and set up for observation, the milk is examined, tasted, the temperature observed, color, &c., noted; if anything is wrong it is discarded at once. The samples from various parties stand together, exposed to free circulation of air, and are watched from time to time, the amount of cream and the richness of the milk noted, the length of time it keeps sweet, &c., and if anything is seen to indicate careless handling, the dairyman is informed, and no more milk will be taken from him unless it is of better quality. Thus an effectual check is put to carelessness before the milk comes to the establishment.

The milk is strained and put at once into ten-gallon open-top cylinders; and after standing in a tank of ice-water till deprived of animal heat, it is heated up to 190 degrees, by setting these cylinders or heaters in a tank of water heated up to this point. A creamy scum rises, which is removed, and this is found to contain butter to the amount of one pound to 2000 quarts of milk. This unavoidable loss is the only deterioration which the milk suffers. A small portion of hard, indigestible viscid albumen attaches itself very firmly to the sides of the heaters. Freed from these, the milk is again strained, and at the temperature above stated, transferred to the condenser on the floor above. This is a globe of iron, fitted with a steam jacket for the lower half, and provided with a steam pipe coiling several times about within. Through each of these, the pipe and the jacket, cold water may be at any moment injected, to prevent boiling over or to prevent the milk adhering to the sides, which is the case if they are not chilled. This condenser is capable of holding about 1000 to 1200 quarts. Connected with the condenser or "vacuum pan" is a barometer to show the degree of exhaustion, and a thermometer to mark the temperature, which is kept at about 150 degrees. The exhaustion is effected by an air pump, and the exhaust pipes pass through cold water to condense the steam rising from the milk. The air which, when the exhaustion first begins, is thrown off from the milk, is, strange as it may appear, of an exceedingly disagreeable smell, a sort of cow or cowyard odor, which is so offensive that special pains have been taken to conduct it away from the house; this notwithstanding the great pains taken to have the milk clean and pure. The milk is thus reduced to one-fourth its volume, and effectually freed from tendency readily to ferment or sour, from any impurities, solid or gaseous, it may have contained, and is capable after being diluted properly of answering all the purposes of the best milk. The cream will rise as usual, and butter may be made, and the milk will show itself possessed of all the properties of fresh milk.

This is indeed a most valuable discovery, and we trust so true a benefactor to his race will meet abundant remuneration. Of course he will be opposed by all the means which milk dealers of New York can bring to bear; but so evident an advantage as he offers to all our citizens who depend for this necessity of life upon other people, will be finally appreciated.

Mr. Borden also prepares an excellent article of of chocolate with his condensed milk, with the addition of loaf sugar; and also an article of sugared milk, for sea voyages, &c.

We were shown some condensed cider, being pure apple juice condensed in the same way to one-fifth or one-sixth its natural bulk; and also some apple jelly, prepared from cider by the addition of sugar—a strong, excellent jelly—*Hartford Homestead*.

Culture of the Cranberry.

The great consumption of, and consequent demand for the Cranberry, has induced many persons to turn their attention to its cultivation.

The high price the berries command in the market, varying from three and a half to five dollars per bushel; their great productiveness and certain yield, and the comparatively easy cultivation of the plant, render them objects of no mean importance, supplying, as they do, in a measure, the void created by the falling-off of the fruit crop; which, year by year, dwindles and becomes "beautifully less."

My attention was drawn particularly to the cranberry, (*oxycoccus macrocarpus,*) during a recent excursion into Burlington county, New Jersey, where I was induced to visit a number of *patches*; some large, but most of them small, where they have been under cultivation for a few years, and in every instance I found their owners so well satisfied with the results obtained, that they have determined to enter into the cultivation the coming season to a much greater extent.

In the region of the pines there seems to be very many natural bogs in which this berry is found growing in a wiid state, and in some places so thickly that they have been known to yield at the rate of two hundred and fifty bushels to the acre. These bogs producing so heavily are most of them leased on improving leases; but I saw many hundreds of acres which required but a little draining, and the necessary planting to make them very productive.

One young man, whom I found at work on a ditch by which he intended to drain an acre or two, told me that he had sold his crop of wild berries for $345 *cash*, and that when he once had his bit of a bog in good condition, it would, with scarcely anything more than the labor of picking his crop, yield him more per annum than a good hundred acre farm.

With the taste and qualities of this berry we are all sufficiently well acquainted, but at their present prices they are beyond the reach of any save those who have their purses tolerably well filled. But with the increase of the cultivation, they must in a few years be so very much reduced in price as to be within the means of all classes.

The manner of cultivation seemed to be very rough, and the vines set out were in all cases, the wild growth of neighbouring bogs; proving, at least, that they are indigenous, and that if improved sorts were planted, and common attention paid, with a soil so suitable, immense crops might be raised.

I call the attention to the cranberry, and the inducements it holds out to young men of industrious habits and small means, from the fact that so many are induced to emigrate to the West and South at a very considerable expense, and often precarious prospects, when they might find profitable employment so much nearer home, and at the same time, enjoy the peculiar benefits and privileges of an older settled community.

CRANBERRY.

[With Cranberries "dearer than ever" this season, our friends's communication is well timed, and his promised continuation of the subject, in all its practical details, will be very acceptable. Unlike most farm crops, this one needs no manure, and will grow where little else will, and with a moderate amount of labor, and it is not surprising that general attention should be growing vigorously towards it.—*Ed. Gardener's Monthly.*]

The Agricultural Bureau.

The following is the preamble and resolution presented in the House of Representatives by Mr. Carey, in relation to the establishment of an Agricultural Bureau by the Government:

Whereas history teaches that there can be no civilization without skill in agriculture, that death is the award of improvidence to nations as well as individuals, and that the extinction of vitality is the consequence of abuse in this fundamental art: that we have the example of the solicitude felt by all the civilized nations of the world for the advancement of agriculture; that it is beyond a doubt that much of our public domain is not capable of supporting life, and much of the land once considered to be inexhaustible has ceased to be cultivated, and the process of exhaustion is on the increase; that the main subsistence—crops of the United States—is yearly growing less, from causes which would appear to be increasing in their action, and which have not been appreciated or properly studied, and there exists a conviction in the minds of scientific and learned authorities, and it is proved by our short experience that the possibility of continuing to produce our great staples, cotton, wheat, tobacco, and corn, under the system of culture practised, is most questionable, and must eventuate in poverty, wretchedness, and a disappearance of population; that the causes and consequences thereof, with their remedies, are susceptible of incontestable proof; that our population is subject to periodical returns of calamities and fatal diseases in a great measure dependent upon our bad agricultural practices; that the richest portion of our inheritance remains not only uncultivated, but a living cause of disease and death, and that within comparatively few years, science has revealed a knowledge of the constitution of the earth, connected with vitality, of the deepest interest to our race—a knowledge not possessed by our fathers, and for a want of which they are in no wise responsible; that the means of greatly lessening the uncertainties that attend upon the methods now in use of increasing articles of necessity and luxuries, of removing the causes of disease, and lengthening the average duration of life, of improving the yield of our lands, is within our reach; that all these great results are perfectly feasible and practicable; and that they are instantly required, is shown by manifestations emanating from divers sources, and by the repeatedly expressed desire of this community that there should be an independent bureau established by this Government: Therefore,

Be it resolved, That the Committee on Agriculture be instructed to report to this House a bill for the promotion of the interests of agriculture, for the organization of the agricultural division of the Department of the Interior, now in a defective condition, and demanding an immediate remedy.

The State Tobacco Warehouses.

The advantages of the proposed sale of the present tobacco warehouses, and the construction of one or several contiguous new buildings on deep water, are briefly these, viewed with reference to a location at Canton:

The present warehouses are most of them old, and some of them dilapidated, not at all fire-proof, but on the contrary of a very combustible character. Three of them are situated on the shallow water of the basin, and two of them inland at some distance from the water.

A new building may be constructed upon a lot having two fronts of 560 and 700 feet respectively, upon the deepest water of the harbor, and a railroad track is now in use upon the street which is one of the boundaries of the lot.

The situation of the property is such as to admit of the entrance of the railroad track from the street into the second story of the warehouses for receiving tobacco, and in the basement other railroad tracks may be constructed running out upon the piers for the delivery of tobacco to ships or for the receiving of it from steamboats and schooners.

The new building might and ought to be constructed in a far more durable and substantial manner than those now in use, and is required by law to be fire-proof.

The labor might be principally performed by means of a ten horse power steam engine—certainly the hoisting of tobacco and the moving of the trucks upon the railway to and from the piers might be done in this manner with great economy.

The saving in drayage would be an important item. At present, tobacco arriving by the Baltimore and Ohio Railroad incurs an expense of drayage to warehouse of 12½ and 18¾ cents per hhd. The Philadelphia, Wilmington and Baltimore Railroad Company offer to haul it over their track from that of the Baltimore and Ohio Railroad for 10 cents per ton, or less than 5 *cents per hhd.* Tobacco arriving by water would incur no drayage. And the present expense of 31½ to 37½ cents per hhd. upon tobacco shipped from Baltimore would be entirely saved.

The labor expenses would be greatly diminished by having regular work for the hands and by having the force proportioned to the need for it, instead of, as at present, maintaining a separate corps of laborers at each warehouse, whether required or not.

The new warehouses ought to be readily accessible by City Passenger Railway; and such is the case at Canton. The opposition to the great reform contemplated in the removal of the Tobacco Warehouses is all traceable to the *purchasers*, who rest their objection to the measure upon the ground of the greater convenience to them afforded by the present locations, in watching the progress and act of inspection of the various descriptions of tobacco.

Now it is respectfully suggested, without any intention of imputing unfair motives to any class of persons, or to any body, that so long as the inspection of tobacco is confided to officers of the State, and so long as the existing practice of selling tobacco by samples continues, it is obviously proper to remove those officers beyond the reach of any influences calculated to affect them.

Another advantage which it is understood was one of the objects designed to be gained by the framers of the bill, was the greater security for the proper performance of their duties by the action of the inspectors jointly, instead of separately, as heretofore.

A most important and imperative consideration in favor of the change is the obvious necessity for increased accommodation for the storage of tobacco in the warehouses of the State.

It has been ascertained that the greatest capacity of the present warehouses does not exceed 26,500 hhds., whereas the quantity of tobacco on hand at one time has reached 32,751 hhds. The expense of storage upon this excess of tobacco, which the present buildings were inadequate to receive, together with other costs incidental to the use of private warehouses, has been a heavy charge upon the tobacco fund. The ample accommodation required by the law to be provided in the new buildings will obviate any such necessity in the future and thus effect an entire saving of this large item of expense.

The improved economy of the whole arrangement, which is shown in this hasty outline, must result in a material reduction of the cost of tobacco inspections, and in a few years the improved condition of the tobacco fund would justify a lower charge of outage than that now fixed by law.—*Marlboro' Gazette.*

Soiling Horses.

A correspondent of the *Genesee Farmer* gives the following results of soiling a pair of horses:

I had near my barn three-fourths of an acre seeded to clover, from which I kept one span of horses in thriving condition from the first day of June last to the last day of August, besides cutting nine hundred pounds of good fodder which I put into the barn, and harvested of the second crop, seed sufficient to stock an acre or two of ground. This may, and undoubtedly will, seem to many incredible In fact, I should doubt such a story myself, had not my eyes seen and my hands felt the truth of the statement. By the time I had mowed two-thirds of this little patch, the remainder was fit to be made into hay, which I accordingly cut and cured after the most approved fashion. And that part mowed first was sufficiently large to mow again. I fed my horses three times a day all they could eat. They smelled not, touched not, tasted not one particle of grain during the three months. Used them more or less every day, and at the end there was a perceptible gain in flesh. Never, since I could say "*my* team," have I summered a pair of horses so cheaply. The greatest cost was in putting it before them. I offered them water, but they did not drink to exceed a pailful a week. I am of the opinion that if they had been turned loose upon this piece of ground, ten days would have been sufficient time to eat up and trample into the earth every thing green upon it. As five acres of good pasture is little enough to summer a span of horses when allowed to run, there is almost an incalculable saving in soiling them.

Sure, he is not fit to *live with* God in that world, who is not *fit to live with man* in this.

Alderney or Jersey Cattle.

SCALE OF POINTS FOR COWS AND HEIFERS.

Art.	1. Pedigree on male side	1
	2. Pedigree on female side	1
	3. Head small, fine and tapering	1
	4. Cheek small	1
	5. Throat clean	1
	6. Muzzle fine, encircled with light color.	1
	7. Nostrils high and open	1
	8. Horns smooth, crumpled, not too thick at base and tapering, tipped with black	1
	9. Ears small and thin	1
	10. Ears of a deep orange color within	1
	11. Eye full and placid	1
	12. Neck straight, fine, and lightly placed on shoulders	1
	13. Chest broad and deep	1
	14. Barrel hooped, broad and deep	1
	15. Well ribbed horn, having but little space between the last rib and hips	1
	16. Back straight from withers to top of hip	1
	17. Back straight from the top of the hips to the setting on of the tail, and the tail at right angles with the back	1
	18. Tail fine	1
	19. Tail hanging down to the hocks	1
	20. Hide thin and movable, but not too loose	1
	21. Hide covered with fine and soft hair	1
	22. Hide of a good color	1
	23. Fore legs short, straight and fine	1
	24. Fore arm swelling and full above the knee, and fine below it	1
	25. Hind-quarters from the hock to the point of the rump, long and well filled up	1
	26. Hind-legs short and straight (below the hocks) and bones rather fine	1
	27. Hind-legs squarely placed, and not too close together, when viewed from behind	1
	28. Hind-legs not to cross in walking	1
	29. Hoofs small	1
	30. Udder full in form, that is, well in line with the belly	1
	31. Udder well up behind	1
	32. Teats large and squarely placed, being wide apart	1
	33. Milk veins very prominent	1
	34. Growth	1
	35. General appearance	1
	36. Condition	1
		Perfect—36

Three points shall be deducted from the number required for the perfection of heifers, as their udder and milk veins cannot be developed. A heifer will be considered perfect at 33 points. No prize shall be awarded to cows or heifers having less than 29 points

SALE OF TOBACCO.—We learn that Messrs. Belt, Bowie & Co., commission merchants of Baltimore, have made a sale of 52 hhds. of tobacco for William B. B. Cross, Esq., from his estate near Marlborough, at an average of $8 per hundred round. This is a still better sale than that of Judge Barker's, chronicled by us last week, that brought $6.37½, and we rejoice to record this "upward tendency" in the market.—*Plant. Advocate.*

Tomato—Culture, Profit per Acre, &c.

In the February number of the *Working Farmer*, in an article on hot-beds, I gave some directions for raising tomato plants. In this article I will treat on the method pursued by those who are engaged in growing them largely for market. Those persons who are engaged in cultivating the tomato, are well aware how necessary it is to have them in market early in the season; a delay of ten days will make a great difference in the profit per acre. As an instance, in the early part of the tomato season they frequently sell from $3 to $4 per bushel, and frequently, three weeks later, bring but 37 to 50 cents per bushel. To insure earliness, tomato plants are transplanted two or three times before placing them in the field. The tomato is yearly gaining favor among all classes. The quantity grown in the vicinity of large cities, is truly astonishing. A gardener living a few miles from New York, recently informed me that his crop last year was 5,000 bushels, all of which he sold to one house, for making catsup.

When tomatoes are grown for market, the soil and situation should be as favorable as possible. They will do best on a rich sandy loam, in good mechanical condition, and kept free from weeds. They should have a southern or south-eastern exposure, so that they will have the advantage of the morning and mid-day sun. If grown on a hill-side, they will be protected from the north wind. The time of transplanting to the field varies in different localities. We transplant in the beginning of May, except cold weather or late frost continue; and if so, we plant late in the same month. The ground is marked the same as when furrowing for corn, care being taken to keep the rows straight; if not so arranged, it is more troublesome in the after cultivation. The plants should be set three and a half feet apart each way, placing them at right angles.

Before removing the plants from the bed, water freely, so that a ball of earth will adhere to the root of each plant. When this method is pursued, the plants are not checked by the removal.

Supposing the ground when marked to represent the squares of a checker board—a man proceeds before the planter with a spade, and makes a small hole on each intersection. The planter then follows and sets one plant in each hole.—They should not be planted deeper than they were in the bed—the man then presses the earth around the roots of the plant with both hands, and so proceeds until the piece is finished. Some tomato growers place a fork full of manure in each hole, and draw the earth around, making a slight elevation, and in this hill place the plant. We pursued this plan for a number of years, but have abandoned it, finding the other much better in good land; in poor land tomatoes will not prove profitable. The culture of tomatoes does not differ from any other crop; practically it means, to keep the ground clean and loose, both of which can be accomplished by the use of the lifting sub-soil plow and horse hoe.

The ground should be frequently disturbed when the vines are small. Late in the season they will give shade enough to keep the weeds down. When the fruit has set, cut off about nine inches of the top of the plant; they will

ripen earlier, and yield more salable fruit than when not so treated. Some growers mulch the ground with salt hay or any other litter, when the fruit commences to turn red. When litter is abundant, it is a good plan; it keeps the fruit clean and facilitates the gathering of the crop.

Tomatoes are collected in what are known as peach baskets; they hold about half a bushel. A smart man will gather sixty or seventy such baskets per day. Tomato growers would prefer raising tomatoes at 37 cents per bushel, than potatoes at 75 cents. The amount realized per acre varies from $100 to $400. When the plants are placed three and a half feet apart each way, it will give per acre 3,760 plants, and allowing six quarts of tomatoes to each plant, would be 22,560 quarts, or 705 bushels, at 50 cents per bushel, would be $357.50. I have frequently picked ten quarts from one plant, so that six quarts is a low estimate. The expense of cultivation, using plenty of manure, need not exceed $65, leaving a good margin for profit.

Col. Wilder on American Pomology.

At the late "Agricultural Lectures" at New Haven, the Hon. Marshall P. Wilder made a famous speech. Indeed no one can speak more understandingly or more interestingly and intelligently upon American Pomology than the honored President of the National Pomological Congress. We quote the following brief sketch taken of his lecture at the time of its delivery:

Mr. Wilder said that there were two thing especially notable when we come to look at American Pomology, viz: First, the multiplication of varieties, and second, the high character of our criterion, or standard of excellence. Of 72 pears enumerated by Quintinye, the gardener of Louis XIV. in 1680, only two are now recommended as worthy of cultivation in our country—so much more sensitive had our taste become. In 1828 there was not a single horticultural society in the United States, and scarcely an agricultural one; now we have over one thousand of the latter and many of the former, while it was difficult to find a decent cottage without its complement of fruit trees. Time was when the Isabella and Catawba grapes were articles of luxury, now they are sold by single dealers by the tun, and are made into wine by the thousand gallons. One dealer in Boston produces annually from the wild grapes gathered on the banks of Charles River, 20,000 gallons; Connecticut manufactures 200,000 gallons; Ohio, 800,000, and one vigneron at Los Angelos, California, turns out 66,000 gallons, or about 2000 barrels of good wine. In speaking of the best modes of cultivation, he gave the first place to prefect drainage and high tillage. Climate, as well as soil, controlled the quality of our fruit. In cold, wet seasons, fruit was likely to be watery and insipid; in fact, this fact was so marked as to entirely change the flavor of really luscious varieties of the pear, so that we would scarcely recognise them as the same as we had eaten in propitious seasons. The failure in fruit-growing were mainly attributable to bad selection of soil and varieties, injudicious treatment, or bad cultivation. All soils are not suitable for fruit-orchards, nor are all kinds of fruit adapted to every locality. Mulching the ground about trees with either straw or rotted compost, he thought an excellent plan.

An orchard should always be kept free from grass and weeds, and no crop be grown between the trees, for fear of starving them. Trees once grown, there should be no plowing deeper than three or four inches, and not even that where the roots would be disturbed. The trees and plants of a country flourish better there than elsewhere. Hence all our efforts are being, and should be put forth, to get new native sorts of first quality.—Of the 36 kinds of apples recommended by the American Pomological Society for general cultivation, 30 are native, so are 10 out of the 14 plums, half the pears, and all the strawberries. He was decidedly in favor of putting the dwarf pear on quince stocks, and he was glad to know that some who formerly were bitterest in their hostility to the practice, were now of his opinion. As to pruning, it is to be remembered that different varieties require different treatment, for they are not all alike in constitutional vigor, or external form. Hence no general rule could be given; each man must learn from experience.

Mr. Wilder made comparison to show how wonderful had been the progress of pomology in this country, and gave us some idea of probable vast national value of our fruit crop at the end of the next decade.

[For the American Farmer.]

Oriole, Banana Bird—Trupio Oriolus.

Fulvous, with black head, throat, wings and tail; the wings marked by two white bars nine inches and a half long. A beautiful species, inhabits the lower parts of North and many districts of South America, as well as the West India Islands, particularly St. Domingo. In its wild state it is agile and gregarious, building a large cylindrical nest, suspended to the end of a slender branch of a tree called Genepa, or Sandbox tree. This tree is more singular than valuable; the fruit resembles a perfect sand-box, of a round form, with little raised, regular divisions, in shape such as we give a cake by means of a patty pan, through which the sand filters and drops into the inside. The traveller is sometimes startled, in riding under them, by a noise resembling the discharge of a pistol, but finds it is the fruit that has exploded and shivered in a thousand pieces. The Oriole seeks this tree that their young may be protected from the attacks of snakes and other animals. It is naturally of a lively disposition, and when domesticated manifests a high degree of docility, following those who have charge of it, descending from a house or tree on being called by its name and delighting to be handled and caressed in the manner of a lap dog. The Trupio I received lived on paste and sweet potatoes as well as bananas.

J. JACOB BOWER.

The American and Siberian Arbor Vitæ are exceedingly beautiful as ornamental trees at corners and along borders, or to fill up between larger evergreens. They are perfectly hardy and bear pruning to suit the fancy. We prefer the American variety, however, as being a more manageable, and making a more symmetrical tree.

SUNDAY READING.

When the flesh presents thee with delights, then present thyself with dangers; when the world possesses thee with vain hopes, then possess thyself with true fears; when the devil brings thee oil, bring thou vinegar. The way to be safe is never to be secure.

Whatever vices we cherish, so many gods we have. I am passionate; anger is my god. I have looked upon a woman to lust after her; lust is my god. What a man desires, and pays his court to, this becomes his god.

It was St. Jerome's complaint, that practitioners of other arts could contain themselves within the bounds of their own profession. "It is only," says he, "the art of explaining the scriptures, which all persons, everywhere, lay claim to.—The chattering old woman, the superanuated dotard, the wordy sophist, and all others presume upon this art; they maul it to pieces; they teach before they learn:" as if this great mystery of Christianity were but one of the common, base, inferior, and contemptible trades. The bold intrusion, therefore, of the unlearned into the chair of the teacher, is that which here, with our blessed apostle, I am to reprehend.

The Church, or the kingdom of Christ, may be thus defined. It is the one universal society of all Christian people, incorporated by the new Covenant in Baptism under Jesus Christ, its Supreme Head, and distributed under lawful governers and pastors into particular churches, holding communion with each other in all the essentials of Christian faith, and worship, and discipline.

This life is begun in a cry, and ends in a groan.

As pride was the beginning of sin, so humility must be the beginning of the Christian discipline.

Pride is the first vice to oppose us, and the last vice which we overcome.

As humility is nothing but a generous contempt of ourselves, so this self-contempt imparts a lively sense of God's greatness, holiness and goodness. That is it which gives humility a being; that is it whereby the holy fire is kindled. A lively sense of God's greatness gives the soul a clear sight of her nothingness; a lively sense of God's holiness, a clear sense of her sinfulness; a lively sense of His goodness, a clear sight of her unworthiness. The greater this sense is, the greater is the humility; while that sense lasts, this humility lasts; when that decays, this vanishes.

Let the penitent be ever mourning; and in his tears let him ever rejoice.

St. Austin, wondering at the overflowing measure of God's spirit in the apostles' hearts, observes that the only reason why they were so full of God was, because they were so empty of His creatures. "They were very full," he says, "because they were very empty," because they were so very empty of the spirit of the world, therefore they were so full of the spirit of God.

Repentance itself is delightful exercise, when it floweth from the principle of love; there is a secret sweetness, which accompanieth those tears of remorse, those meltings and relentings of a soul returning unto God, and lamenting its former unkindness.

The whole life of a good Christian is nothing else but a state of holy desire.

All things in the whole order of nature, from the highest heavens to the smallest hair, are always to be considered, not separately, as they are in themselves, but as in some relation to God.

All vehement asseverations have in them somewhat of the nature and are dangerous beginning of oaths; and those who accustom themselves to them, will in time think them not forcible enough to confirm their speeches, and so be brought to attest them by oaths.

Certainly in taking revenge, a man is but even with his enemy; but in passing over it he is superior, for it is a prince's part to pardon.

The surest way to keep others in temper is to keep ourselves so.

The christian's courtesy prevents him from giving offence; and his charity from taking it.

The King of Heaven came down to instruct the world in the laws of a heavenly conversation, which He proposed in a way of conflict, quite contrary to that in the Olympic games; for there, he who fights and conquers wins the garland; here, he that is beaten and bears it with patience receives the crown; there, he that is smitten, and returns blow for blow; here, he that *turns the other cheek*, is celebrated the victor, in the theatre of angels; for the christian victory is measured not by revenge, but patience; this is the new law of crowns, this the new way of conflict and contention.

To return good for good is human; to return evil for evil is brutal; to return evil for good is diabolical; but to return good for evil is divine.

Remember that in every quarrel, the person who has been the least to blame, is generally the most ready to be reconciled, and try your own heart by this rule.

Believe it, there is no sin so small, but it tends to the utmost wickedness that can possibly be committed. An irreverent thought of God tends to no less than blaspheny and atheism; a slight grudge of another tends to no less than murder, a lascivious thought tends to no less than impudent and common prostitution; and though, at first, they seem to play only singly about the heart, yet, within a while, they will mortally wound it.

All sin is perfected in three ways, namely, by suggestion, by delight, and by consent; the suggestion is from the devil, the delight is from our flesh, the consent from our spirit, (our own choice and will.)

No weight of God's whole hand *here*, can be so heavy as any finger of His in hell.

Wholesale Produce Market.

Prepared for the American Farmer by ELLICOTT & HEWES, *Produce and Commission Merchants, 59 Exchange Place.*

BALTIMORE, April 23, 1860.

BUTTER.—Ohio, in brls. and Kegs, 11 to 12¼; Virginia and Pennsylvania, in kegs, 12 to 18; Glades 16 to 22; New York or Goshen 18 to 23; Roll 14 to 20.

BEESWAX—37 cts.

CHEESE.—Eastern 13, Western 12.

DRIED FRUIT.—Apples $1.40, Unpeeled Peaches $2.50 to $3; Peeled do. $5.

EGGS—In barrels, 15 cents per dozen.

FEATHERS—45 cents.

HONEY.—In the comb, 14 cents per pound.

LARD.—Brls. 11¼, kegs 12¼, jars and other country packages, 12 to 12½.

TALLOW—11 cents.

WOOL.—Unwashed 26, tub washed 35 to 38, pulled 31, fleece 46.

Baltimore Markets, April 23.

COTTON.—The demand is fair for manufacturers—sales have been made within past few days at our quotations:

Grades..	*Upland.*	*Gulf.*	*Western.*
Middling.....	11¼a11¾	12a12¼	11¾a11¾
Good Middling.	12a12¼	12¼a12¾	12a12¼
Middling Fair.	12¾a12¾	13a13¼	12¾a12¾

FISH.—The market continues inactive. We quote prices as follows: Mackerel, $9.50 to $10 for medium; $10.50 to $11 for large No. 3; $17 to $17.50 for No. 1.—Alewives, $4 to $4.25. Herrings, $2.50 to $3.50 for Halifax, and $4 to $4.50 per bbl. for Labrador.

FLOUR.—We quote Howard street Super, $6.25; Extra, $6.75. Ohio Super, $6.25; Extra, $6.75. City Mills Super, $6.12½; Extra, $7.00. Family Flour, $7a$7.50 for the different brands; very choice brands, $8.25.

Rye Flour and Corn Meal.—We quote Rye Flour at $4.50. Corn Meal at $3.62½ per bbl.

GRAIN.—*Wheat.*—Red, $1.47 to $1.50 for fair to prime. White, $1.63 to $1.80, for fair to choice.

Corn.—We quote white at 74 to 76; yellow 73 to 75 cts.

Oats.—Maryland and Virginia, 42 to 45; Pennsylvania, 45 to 48 cents.

Rye.—Maryland and Virginia, 88 to 90; Pennsylvania, 92 to 93 cents.

Mill Feed.—Brown stuff, 23 to 25; middlings, 38 to 42 cents per bushel.

POTATOES are selling at 55 to 90 cts. per bushel, according to quality.

PEAS AND BEANS.—Black-eyed Peas, $1.05 to $1.25 per bus. Beans, $1 to $1.50 per bus., as in quality.

PROVISIONS—*Bacon.*—Shoulders, at 8, and Sides at 10 cents per lb.

Bulk Meat.—Shoulders 7; Sides 9 cents per lb.

Pork.—Mess, $18; Prime, $14.75. Rump, $14.

SEEDS.—Clover seed, $4.50 to $5.25. Timothy, $3.50; Flaxseed, $1.35 to $1.45 per bus.

TOBACCO.—Maryland Tobacco is coming forward freely—the quality of the greater portion of receipts ranges only from common to middling—there is a good demand. We still quote frosted Maryland at $2; ground leaf at $3 to $7; common at $2.50 to $3.50; middling, $4 to $4.50; good middling, $5 to $5.50; good leaf, $6 to $6.50; and fine at $7 to $12. In Ohio Tobacco not much is doing.—There are also but small transactions in Kentucky Tobacco. We continue quotations, viz: common lugs at $4.25 to $4.75; good do. at $5.25 to $5.50; inferior leaf at $5.75 to $6.25; good do. at $6.50 to $7.50; fine at $7.50 to $9; choice at $10 to $12; and rich heavy Kentucky at $7 to $12.50.

SALT.—Turks Island, (except in cargo lots,) 20 cents per bushel.

GUANO AND OTHER FERTILIZERS.—Prices continue without change. We quote Peruvian at $61 to $62 per long ton, according to quantity—the latter being for a single ton and upwards. For less than a ton, at the rate of $56 per ton of 2000 lbs.; California or Elide Guano, $50 per long ton; Manipulated, $47; Super-Phosphate, $45; Mexican AA, $20 to $22; Mexican A, $16; American Guano $40 per ton of 2240 lbs.; Sombrero, $32 per long ton, and Colombian $40. Navassa Guano, finely ground, $25 per ton. Ground Bones, $25 to $27 per 2000 lbs.

GINSENG—70 to 75 cents per lb.

HIDES—Country slaughtered, 9 to 9¼; dry do. 14 to 15 cents.

HOPS—15 to 16 cents per lb.

HAY AND STRAW.—Hay, $17 to $19 for baled, and $18 to $19 per ton for loose. Straw, $12 to $13 for rye, and $11 to $12 per ton for wheat and oat.

CATTLE MARKET, April 19.—The market for Beef Cattle was rather dull to-day, but about the same prices were obtained for such lots as were sold, as on last market day. There were about 650 head offered at the scales, 100 of which were driven to Philadelphia, 125 were left over unsold, and the remaining 425 head were taken by Baltimore butchers at prices ranging from $4 to $5.25, averaging $4.62½ per 100 lbs. gross.

HOGS.—The receipts of Hogs have for some days past been light, and since our last report prices for them have improved 25 to 50 cents per 100 lbs. They have been selling for some days past at $8 to $8.50 per 100 lbs. net, and they were steady to-day at these figures.

SHEEP.—Sheep have declined since our last, and we now quote them at $4.25 to $5.25 per 100 lbs. gross.

NEW ADVERTISEMENTS.

Addison, Wallace & Co., (Alex.)—Farming Implements.
Angell & Co., A. H.—American Guano.
Ault & Son, Sam'l—English Garden Seeds.
Baynes & Son, James—Wool Dealers.
Borum & McLean, (Norfolk)—Agricultural Implements.
Box, No. 21, P. O.—Newfoundland Dogs.
Corser, C. F.—Hubbard's Reaper and Mower.
Dingee & Co., W. W. (York, Pa.)—Threshing Machines.
Dudley, Alex. (Virginia,)—Farm for sale.
Edney, Jas. M. (New York,)—American Pump.
Evans, R. H.—Catawissa Raspberry.
Gowan, Jas. (Mt. Airey, Pa.)—Sale of Short Horns.
Gatchell & Co., J. L.—Pumps and Water Fixtures.
Higgins, Jesse T. (Poolesville)—McCormick's Reaper and Mower.
Hussey, Obed—Reaper and Mower.
McCammon, C. & W. (Albany,)—Tile Works.
Malcolm & Co., P.—Johnson's Island Guano.
Morris, Paschall (Phila.)—Durham Bull.
Norris, Thomas—Westinghouse Thresher and Cleaner.
Norris, Thomas—Manny's Reaper and Mower.
Norris, Thomas—VanWickle's Grain Fan.
Petersburg Fertilizing Co. (Virginia)—Southern Fertilizer.
Rogers, C. B. (Phila.)—Honey Blade Grass Seed.
Sinclair & Co., R. Jr.—Stetson's Reaper and Mower.
Sinclair & Co., R. Jr.—Improved Corn Drill, &c.
Spear & Forney—McCormick's Reaper and Mower.
Spear & Forney—Fisher's Mower, &c.
Thorburn & Co., J. M. (New York,)—Seeds & Plants.
Washington, John (Va.)—Farm Roseland.
Worthington, Geo. Y.—Chester Pigs.
Whitman & Co., E.—Manny's Reaper and Mower.
Worthington & Lewis—Small Farm.

CONTENTS OF THE MAY NO.

Farm Work for Month ...321
Vegetable Garden.....322
Fruit Garden.....323
Flower Garden.....323
Flowers for Summer and Fall.....324
How they serve us at the Balt. Cattle Scales....325
Toads in the Garden 326
Peach Crop.....326
Poultry—Fatal Disease..327
Felspar, Change of Pasture, &c.....327
Mixed Stock in Pasture..327
The Heroes of Peace 328
Composting Manures....329
Culture of Horse-Radish.329
Butter made from Starch.330
Manuring Pastures and Meadows.....331
The Dairy.....332
Tobacco.....333
Air Drainage.....334
Gulf Stream.....334
Butter for Market.....335
Perfumes.....335
The Maryland Agricultural College.....336
Editorial Notices.....336
State Agricultural Soc..337
Lime, Guano, &c.....338
Confession of a Country Gentleman.....339
Book Notices.....340
Md. Agri. Society.....340
German Millet.....340
The Profits of Soil Cultivation.....341
Live Stock.....342
Experi'ts with Manures.343
Cotton.....344
Basket Willow..... 345
Stable Management of a Horse.....345
Gail Borden's Condensed Milk Laboratory.....346
Culture of the Cranberry.347
Agricultural Bureau....347
State Tobacco Warch'es..348
Soiling Horses.....348
Alderney or Jersey Cattle 349
Tomato—Culture, &c....349
American Pomology 350
Oriole, Banana Bird.....350
Sunday Reading.....351